TECHNOLOGY DEPARTMENT

NEW EQUIPMENT DIGEST

A Penton Publication

September, 1954
Volume 19—Number 9

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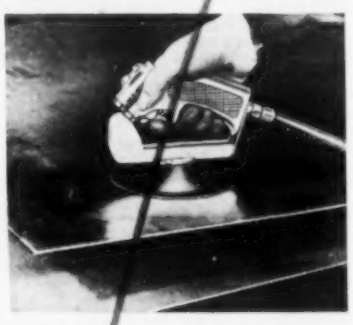
Use Inquiry Slips—Pages 8 and 104

EQUIPMENT • MATERIALS • PROCESSES • DESIGNS • APPLICATIONS • LITERATURE

SHEET LIFTER
vacuum-type unit uses compressed air



While trigger in the pistol grip handle of the Pres-Vac sheet lifter is held down, suction cup will pull 11 psi. Tool obtains this positive lift by passing compressed air through an integral venturi at 45 psi. Resultant vacuum is conveyed to the rubber lift cup through passages in the handle. A regulator is supplied with the device to reduce air line pressure to 45 psi, which is the ideal pressure for best operation. Tool will exert pull on any flat surface on which a vacuum can be maintained. Uses range from feeding sheet steel to auto body repair. Neoprene vacuum cup withstands oil, grease and heavy wear. Made by **F. J. Littell Machine Co.,** Air Div., 4555 Ravenswood Ave., Chicago 40, Ill.

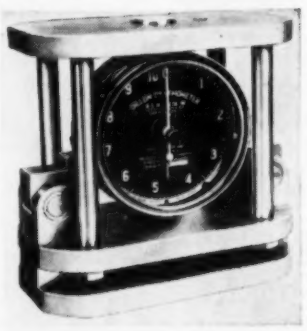
▲ For more details circle **NED-1 J4** on enclosed inquiry slip ▲

WHITEPRINT MACHINE
reproduces at up to 30 fpm

High capacity model 800 whiteprint machine reproduces translucent engineering drawings and business forms up to 42-in. wide at speeds up to 30 fpm. Continuous operation, electronic variable speed drive and printing speed stabilizer are features. Dry development section temperature is thermostatically controlled and vapor circulation is automatically coordinated with machine speed. Prints are stacked and collated at an adjustable front tray. Optional equipment includes rear stacking device and a constant torque motor to take up long prints or roll stock. Made by **General Aniline & Film Corp.,** Ozalid Div., 16 Ansco Rd., Johnson City, N. Y.

▲ For more details circle **NED-2 J4** on enclosed inquiry slip ▲

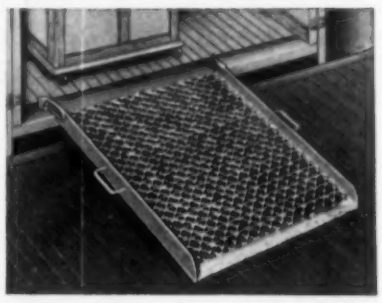
PRESSURE CELL
measures pressures up to 10,000 lb



Checking hydraulic and air presses, measuring journal bearing pressures and weighing heavy or bulky items are possible uses for Pressure Cell which will indicate forces up to 10,000 lb. Instrument consists of Dillon traction dynamometer mounted in steel cage so that compressive loads applied are instantly indicated on the dial. Unit measures 9 9/16 x 9½ x 5 in. and weighs about 42 lb. Seven capacities from 0-250 to 0-10,000 lb, each capable of withstanding 25 per cent overload are available. All models have maximum pointers. Made by **W. C. Dillon & Co.,** Dept. NED, 14620 Keswick St., Van Nuys, Calif.

▲ For more details circle **NED-3 J4** on enclosed inquiry slip ▲

DOCK RAMP
design assures safe footing



Designed for use in the small incline from loading dock to truck body, this loading ramp is of a grating which assures safe footing while permitting small industrial casters to roll over its surface easily. Footing is not affected by grease, oil, ice and snow and other hazardous conditions. Lightweight platform is available in 30 in. long by 27 in. wide and 30 x 30 in. sizes as standard. Made by **Bustin Firm-Grip Grating Corp.,** Dept. NED, Randolph Township, Dover, N. J.

▲ For more details circle **NED-4 J4** on enclosed inquiry slip ▲

ORGANIC VAPOR RESPIRATOR
filters not clogged by paint spray

Clogging of the cartridges of No. 99 organic vapor respirator during paint spraying can be prevented by fitting auxiliary cellulose filters. These are placed over the regular cartridge and are held in place by the standard retainer ring. Respirator has soft rubber facepiece providing a leakproof fit with minimum headband tension. It is designed to rest low on the face so as not to interfere with eye protective equipment. Made by **Chicago Eye Shield Co.,** 2335 Warren Blvd., Chicago 12, Ill.

▲ For more details circle **NED-5 J4** on enclosed inquiry slip ▲

SOLDERING IRON
⅜-in. diameter tip for fine work

Rapid soldering speed as well as a tip small enough for work in confined quarters are featured by No. 450 soldering iron. Rated 150 w with ⅜-in. diameter plug-type tip, iron is only 12⅜ in. overall. Double baffle helps maintain comfortable handle temperatures. Hardwood handles are flared to protect fingers from hot portion of tool. Iron is offered in standard voltages by **Vulcan Electric Co.,** Dept. P, 86-90 Holten St., Danvers 7, Mass.

▲ For more details circle **NED-6 J4** on enclosed inquiry slip ▲

INDUSTRIAL FLOORING MATERIAL
usable over wood or concrete floors

Only a ¼-in. topping of Stoncap flooring material is required to smooth out worn, broken and rutted surfaces. Used over wood, concrete or composition floors, either indoors or outdoors, product provides dustless, nonskid, fire-resistant surface that feather edges perfectly. Topping is durable and resilient and stands up under grease, oil or other destructive agents. It takes traffic on the morning following application. Maroon, Forest Green and Gunmetal are available colors. Made by **Stonhard Co.,** Dept. NED, 1306 Spring Garden St., Philadelphia 23, Pa.

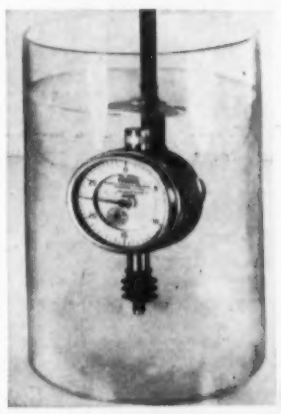
▲ For more details circle **NED-7 J4** on enclosed inquiry slip ▲

LIFT TRUCK
has 2000-lb capacity, 60-in. lift

A 60-in. lift and capacity of 2000 lb is provided by this Hydrolectric lift truck designed for use in close quarters with low headroom. Unit also operates efficiently in the below-zero temperatures of refrigerated warehouses, trucks and freight cars. Other features include the Dyna Dual power unit with twin front wheel drive for maximum stability and a totally-enclosed motor. Made by **Lift Trucks, Inc.,** 2427 Spring Grove Ave., Cincinnati 14, O.

▲ For more details circle **NED-8 J4** on enclosed inquiry slip ▲

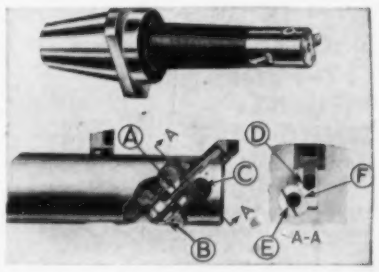
WETPROOF DIAL INDICATOR
protected against liquids and dust



Rubber boot which fits tightly into grooves in the stem and contact point of W series of wetproof dial indicators prevents the entry of splashing coolants, oil, oil fog or excessive dust through the lower bushing. Boot does not interfere with free movement of rack. Rubber sealing rings between bezel and dial seal and in back and dust cap make the case completely liquid and dustproof. Case is of heavy duty design to withstand severe use and crystal is made of glareproof glass that will not discolor. W series indicators are supplied in C size (2½ in. diameter). Made by **Federal Products Corp.,** 1118NR1 Eddy St., Providence 1, R. I.

▲ For more details circle **NED-9 J4** on enclosed inquiry slip ▲

MICROMETER BORING TOOL
adjustments made with one hand



Adjustments and clamping of this quick-change micrometer boring tool can be made with one hand and without pulling tool away from work. Micrometer adjusting screw A is completely enclosed and bit is positioned from seat B recessed in bar itself. Lock screw C releases wedge clamp. When clamp D is loosened, spring insures positive contact between wedge and tool bit. Eccentric hole E in the wedge prevents wedge from turning, allowing easy insertion of tool bit. Wedge clamp angle F assures strong mechanical lock on tool bit. Individual micrometer boring units are available for any type boring bar. Made by **Portage Double Quick Tool Co.,** 1043 Sweitzer Ave., Akron 11, O.

▲ For more details circle **NED-10 J4** on enclosed inquiry slip ▲

NEW! **VALVAIR SPEED KING SOLENOID PILOT OPERATED CONTROL VALVES**

The New Valvair Speed King line is complete — 3-way, 4-way, 4-way-5-port (2-pressure), foot-mounted or sub-base manifold mounted; pipe sizes — ¼", ⅜", ½", ¾", 1". A precedent-breaker in size, weight, speed and endurance. Get all the facts!

VALVAIR CORPORATION Affiliate: Sinclair-Collins Valve Company 947 BEARDSLEY AVE., AKRON 11, O.
REPRESENTATIVES IN PRINCIPAL CITIES

Rely Upon Valvair DIVERSATILITY

ASK FOR BULLETIN "N-9"

▲ For more details circle NED-11 J4 on enclosed inquiry slip ▲

Evans King-Size 10-ft. Steel Tape

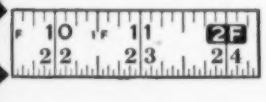
STANDS UP STRAIGHT for UPRIGHT MEASUREMENTS

Those long upright measurements are easy and accurate with this new EVANS King-Size 10-ft. White-Tape. The 33% wider blade (full ¾") stays straight up without bending or buckling. You get a *free* belt clip and Tenite utility case with every tape. Sliding end hook for inside or outside measuring and . . .

it's marked so you don't have to figure! no other tape is marked this Evans way.

This Edge—marked in feet and inches with foot markings at every inch.

This Edge—marked in inches from 1" to 120".



Whichever way you work, in inches or feet and inches, you read *instantly* without having to stop and figure.

The EVANS King-Size White-Tape Is the Top 10-ft. Tape value at only $2.39. Purchase from your supplier.

another EVANS value—

THE ONLY 12-FOOT POCKET WHITE-TAPE

"Standard blade ½" wide"

This L-O-N-G-E-R Pocket White-Tape only $1.89

Purchase from your supplier.

Now, a pocket steel tape that measures a full 12 feet — eliminates the inconvenience and inaccuracy of adding two measurements as you do with shorter tapes. Exclusive EVANS double markings (same as King-Size above). Chrome plated case is *no bigger than cases for shorter tapes.* Self-adjusting sliding hook for 100% accurate inside or outside measurements. Each tape packed in FREE transparent Tenite utility case. **Free Sample Tape Available** If your distributor does not carry these EVANS Tapes, have your purchasing agent write direct to the factory giving the name of his distributor and requesting a free sample tape. Specify whether 12 ft. L-O-N-G or King Size Tape is wanted.

Evans & CO.

400 Trumbull Street, Elizabeth, N. J., U. S. A.

Evans "Long Tapes"—25-50-75-100 ft. and Evans 6-ft. Folding Rules

details circle NED-12 J4 on enclosed inquiry slip ▲

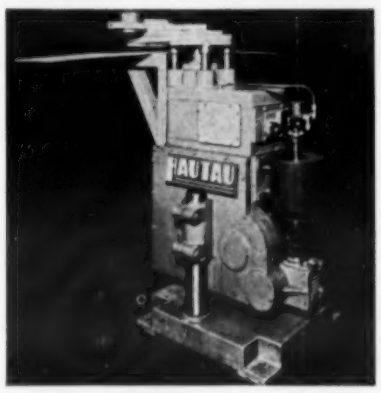
Want to Receive NED?

Just who receives the 70,387 copies of NEW EQUIPMENT DIGEST in the 42,558 plants we reach each month? Only those having an engineering, management, operating, maintenance, specifying or purchasing title qualify to receive this magazine free. Furthermore, they must be employed by a firm listed in Dun & Bradstreet as a manufacturer or processor. The only exceptions to this rule are key men of railroad, steamship and transportation firms, or those in utilities and government projects.

If you would like to receive NEW EQUIPMENT DIGEST regularly and have a position which fits the above qualifications, please let us know. The self-mailing inquiry slip in this issue provides a convenient way to do so.

A. N. Gregg
EDITOR

AUTOMATIC LOADER for presses and machine tools



Parts are picked up, one at a time, from a conveyor line and deposited in a machine tool or on another conveyor by two arms of the Oct-O-Pus motor driven automatic loader. Arms of the universal floor type machine rotate through 120 degrees and have total cycle time of 2 seconds. Various types of parts can be loaded or unloaded from presses and vertical spindle machine tools. Actuator box is adjustable vertically from 0 to 6 in. Standard models are powered by ⅓-hp motors and arms are made to suit individual operation and parts requirements. Made by **Hautau Engineering Co.,** Dept. 1, 721 Wanda, Ferndale 20, Mich.

▲ For more details circle NED-13 J4 on enclosed inquiry slip ▲

Industrial Rolls

Paper Machinery & Research Inc.—16-page illustrated catalog "Quality Industrial Rolls" shows types of rolls available for paper, plastics, textile, printing and other industrial uses. Company maintenance and engineering service is also covered. Light duty tubular, heavy duty solid and other types of rolls are included, as are rubber covered, chrome and copper plated rolls.

▲ For more details circle NED-14 J4 on enclosed inquiry slip ▲

Get This Informative Free Booklet on New Uses for Straits Tin

New, 20-page booklet tells important story of Straits Tin and its many new uses today. Fully illustrated. Includes sections on new tin alloys, new tin solders, new tin chemicals. Covers tin resources and supply, Malayan mining. Booklet is factual, informative—could well prove profitable to you. Mail coupon now.

THE MALAYAN TIN BUREAU
Dept. R, 1028 Connecticut Ave., Washington 6, D.C.

Please send me a copy of your free booklet on new uses for Straits Tin.

Name_____
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Street_____
City_____ Zone_____ State_____

▲ For more details circle NED-15 J4 on enclosed inquiry slip ▲

Here's the NEW

Kwikfluxer

Plastic Squeeze Dispenser

- Ready for Use
- No Waste
- Unbreakable
- Handy Size
- Refillable

KWIKFLUX No. 54 Patented

For Silver Brazing and Hard Soldering

Now in this handy, waste-free, unbreakable KWIKFLUX Applicator Container. Pierce the tip and it's ready for use. Just apply tip to work and squeeze gently. Small opening prevents evaporation. Holds full 12 ozs. of world's finest, deepest penetrating, quickest acting silver brazing and hard soldering flux.

Unexcelled for flow on stainless steel, regular steel and other ferrous, non-ferrous and precious metal alloys. Proven best for brazing carbide tips and tools. Makes more complete and better brazes in those long deep joints.

DISTRIBUTORS: Territories available. Strong advertising and merchandising support. Write for details.

KWIKFLUX NO. 54 in the new 12 oz. Squeeze Dispenser, **$1.60** each ppd. Order from your supplier; if not available, order direct, giving name of supplier.

SPECIAL CHEMICALS CORP. 100 South Water St. Ossining, New York

▲ For more details circle NED-16 J4 on enclosed inquiry slip ▲

Equal power with fewer belts . . .

NEW BROWNING SUPER GRIPBELTS

Oil proof . . . non-spark . . . heat-resistant

Illustration shows how 20 Browning Super Gripbelts can deliver same power as 30 standard belts, saving space and reducing sheave cost. Improved synthetic cord construction provides far greater strength and safety margin, better grip, less slip. Minimum stretch, maximum flexibility, simplified matching.

Ask your Browning distributor or write us for Bulletin 2019.

Browning MANUFACTURING COMPANY MAYSVILLE, KENTUCKY

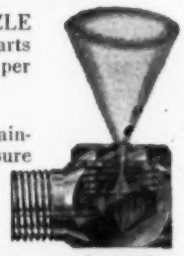
▲ For more details circle NED-17 J4 on enclosed inquiry slip ▲

DELAVAN SPRAY NOZZLES FOR UNUSUAL APPLICATIONS

Type WD

There is a DELAVAN NOZZLE for any flow rate from 2 quarts per hour to 63 gallons per minute.

TYPE WD—ideal for obtaining finest possible pressure atomization.



Type WR

TYPE WS—available for either full or hollow cone spray. Excellent for a wide variety of special applications.

Type WS

TYPE WR — a right angle nozzle producing hollow cone spray similar to Type WS.

TYPE AG—delivers flat uniform spray without concentration at edges. Drifting reduced to minimum.

Type AG

Write for Catalog No. 31

DELAVAN MANUFACTURING CO.
GRAND AVENUE & 4TH STREET
WEST DES MOINES, IOWA

▲ For more details circle NED-18 J4 on enclosed inquiry slip ▲

New Banister Dust Collector ELIMINATES DUST PROBLEMS!

Now, with today's most outstanding dust collector, the Banister *Dustmaster*, you can efficiently and economically solve your dust problems! The *Dustmaster* is a modern, efficient cyclone which separates dust from air by means of centrifugal force. It incorporates the simplest yet most practical design features. It has high collection efficiency and low energy loss; it is economical to install; and it requires a minimum of space. It has wide application in many industries for removing nuisance and hazardous dusts . . . thereby reducing equipment maintenance, increasing productivity, improving product quality, and maintaining a clean healthful working atmosphere. It's also ideal for recovering valuable materials from dust.

Send us your dust problem and we'll show you specifically how the *Dustmaster* can solve it . . . or write today for big, fully illustrated *Dustmaster* catalog and case history material showing how Banister *Dustmaster* Systems solved many so-called "impossible" dust situations. **A. W. Banister Co., Inc., 21 Charles St., Cambridge, Mass.** . . *dust collecting and pneumatic air system specialists since* 1911. *Advt.*

▲ For more details circle **NED-19 J4** on enclosed inquiry slip ▲

100 h.p. MODULĀTIC
Length, 87" • Width, 60" • Height, 73"
Dimensions of other sizes are in proportion.

FOR POWER, PROCESSING, HEATING

HERE'S NEWS! Thanks to a new and much larger plant (occupied March 15, 1954) with the finest of modern production facilities, Modulātic reliability and proved performance can now be extended to a wide range of industrial work. Savings in time, maintenance, and fuel are unquestioned. It's the world's most compact source of steam.

ALREADY MORE THAN 6000

The Modulātic is only about 1/5 the size of conventional boilers—comes to you as a complete unit on a single steel base. It passes through normal plant-type doorways, needs no enclosure, installs without expensive foundation or stack in boilerroom or basement, on factory floor, balcony, or roof . . . anywhere, for any purpose.

Operation is automatic—requires virtually no attention. No early reporting. No week-end or holiday standby. Merely set for the pressure desired. Modulātic maintains this pressure, regardless of steam demand.

NOTHING ELSE LIKE IT

Turbulent firing in a pressurized combustion chamber gives Modulātic amazing compactness without the sacrifice of efficiency. Unless you've seen this particular unit, you've seen nothing like Modulātic. Its convenience, conservative ratings, and outstanding performance are backed by more than 50 years' experience in steam generation and controls. Write for complete information about this first steam generator for industrial use to be introduced thoroughly proved.

*Developed in 1932 to heat passenger cars from Diesel locomotives, Vapor Steam Generators remain the exclusive unit for this exacting service.

BRIEF SPECIFICATIONS

Ratings (7 sizes).....18 to 160 hp.
Pressures.....5 to 285 psi.
Fuel...Oil, Gas, Flip-Switch Combination
Efficiency.....78-82%

Inquiries invited from qualified distributors in territories not yet assigned

VAPOR HEATING CORPORATION
80 East Jackson Blvd. • Chicago 4, Illinois
New York • St. Paul • Denver • St. Louis • Atlanta • Washington • Philadelphia
San Francisco • Houston • Jacksonville • Richmond • Montreal • Los Angeles

▲ For more details circle **NED-20 J4** on enclosed inquiry slip ▲

SLIDE RULE handles wide range of calculations

In addition to standard scales, this Mighty-Mite slide rule yields trigonometric formulas for right triangles, signs and limits of values by quadrant as well as natural functions. Also included are slide rule settings for general equivalents, a four-place logarithmic table, decimal equivalents for 32nds, and several commonly-used arithmetic, algebraic and geometric formulas. Developed for use by engineers engaged in thermostatic work, computor contains data necessary for calculating applications for thermostats controlling small motors. Protective envelope is perforated to fit standard work books. Included are complete instructions for using this versatile 10-in. slide rule which incorporates nine standard scales including CI reciprocals. It is available free. Write on company letterhead to **A. R. Wells, Mechanical Industries Production Co., 219 Ash St., Akron 2, O.**

▲ For more details circle **NED-21 J4** on enclosed inquiry slip ▲

RELATIVE HUMIDITY CABINETS provide 50-90 per cent controlled humidity without any condensation

Counterflow air baffle-cooling coil arrangement of these relative humidity cabinets assures high humidity without condensation on test specimens. Humidity is controllable within 2 per cent at any point from 50 to 99 per cent. Dry bulb temperature range is from ambient to 70° C and is accurate to ±1° C. Extended surface cooling coil and solenoid valve is standard for circulation of tap water. Vertical air flow convection is maintained by low velocity motor and blower.

Among features are stainless steel construction, inner glass observation door, automatic water level feeder, wet and dry bulb thermometers and 3-in. Fiberglas insulation on all sides. Four available sizes range from 1.4 to 10.0 cu ft capacity and operate on 115 v 60-cycle ac. Built-in Modella tubular heater and auxiliary switch, when used, permits saturated relative humidity. Made by **Blue M Electric Co.,** 307 W. 69th St., Chicago 21N, Ill.

▲ For more details circle **NED-22 J4** on enclosed inquiry slip ▲

Do you know about the new power jacks? The remote controlled hydraulic jacks? Jacks that lower loads automatically, safely and quickly? Do you know how to select the right jack for the job at hand? How to instruct workmen on the safe use of jacks and how to keep jacks in good working order? Duff-Norton, the world's oldest and largest manufacturer of all types of lifting jacks for every industrial use, has just published a new 40-page, illustrated jack manual—the most complete encyclopedia on the subject of lifting jacks ever attempted. This new manual contains complete specifications on more than 300 different types and sizes of ratchet, screw, and hydraulic jacks from 3 to 100 ton capacities, both manual and power operated. It contains 40 pages of useful information that will enable you to get lifting, lowering, pushing and pulling jobs done faster, safer, at lower cost. Write today for your copy of Bulletin 204-N. It's yours for the asking! **The Duff-Norton Manufacturing Co. P. O. Box 1889, Pittsburgh 30, Pa. Canadian plant—Toronto 6, Ontario.**

▲ For more details circle **NED-23 J4** on enclosed inquiry slip ▲

STRIP WIRE FAST and CLEAN with an IDEAL "E-Z" Stripper

RUGGED — ALL STEEL

A heavy duty stripper that's as easy to use as pliers. Does not score or damage wire. At end of stripping stroke, automatic lock prevents snap-back and crushing of stranded wire. Part of stripping blade can be used as wire cutter. Blades are hardened steel and are replaceable. Six models handle wire gauges No. 8 to No. 26; also 300 ohm TV wire.

SOLD THROUGH LEADING DISTRIBUTORS ★ MAIL COUPON for Catalog Data

IDEAL INDUSTRIES, Inc.
1032 Park Avenue, Sycamore, Illinois
Please send catalog data on "E-Z" Automatic Wire Stripper.
Name_____
Company_____
Address_____
City_____ Zone____ State____

▲ For more details circle **NED-24 J4** on enclosed inquiry slip ▲

DO YOU *Roll* FLEXIBLE MATERIALS?

Dyken Automatic Rolling Machines give you important time and labor savings on

SCREENING • LAMINATED PAPER • TEXTILES
ROOFING • CARPETING • WALLPAPER
RUGS • PLASTIC • RUBBER • LEATHER
OILCLOTH • LINOLEUM • CANVAS • CORK
PADDING • FELT • BURLAP • INSULATION
and other pliable materials!

NOW YOU CAN roll up more lengths per hour . . . with less labor! Rolling and paper-wrapping also handled in one speedy operation. DYKEN Automatic Rolling Machines (fully patented) are available for all material widths and lengths. Push-button operation permits using unskilled help. Tight, neat rolls require no center core or pole. You save time—labor—shipping and storage space.

WRITE FOR LITERATURE AND RECOMMENDATIONS — Send details of your problem for expert analysis and advice. No obligation.

DYKEN MFG. CO., Inc.
736 Indiana Ave.
West Bend, Wis.

▲ For more details circle **NED-25 J4** on enclosed inquiry slip ▲

MORE WORK *using* FEWER WORKERS *with* DUO-FAST One-Hand AUTOMATIC TACKERS

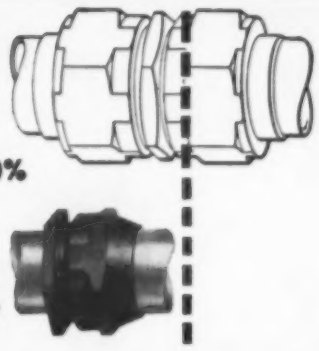
You can do much more tacking in less time with these efficient Duo-Fast Tackers . . . You'll like the wide range of AIR TACKERS, GUN TACKERS and HAMMER TACKERS available. You get exactly the model you need . . . You'll like our money-saving FREE MAINTENANCE SERVICE. For the complete story, mail this coupon.

FASTENER CORP. 860 Fletcher St., Chicago 14, Ill.

FREE — TELL US MORE about Duo-Fast Tackers for — _____
Our Business is_____
Company Name_____
Address_____
City_____ State____

▲ For more details circle **NED-26 J4** on enclosed inquiry slip ▲

Reduce "AN" Coupling Size & Weight by more than 50%



with

RUBBER TECK'S RIGID, LIGHTWEIGHT DUCT CONNECTOR

Other RUBBER TECK PRODUCTS
- Flexible Breakaway Connectors
- Flexible Hot Air Duct Connectors
- Flexible Fluid Line Connectors
- Duo Seals

COMPARATIVE SIZE AND WEIGHT REDUCTIONS

"AN" DESIGN	RUBBER TECK DESIGN
Overall length (2" dia.)....5.25 in.	(2" dia.).....2.00 in.
Number Parts 5	 3
Weight .....1.66 lbs.	.....0.53 lbs.
Material .....Aluminum	..... Aluminum
Also available in stainless steel.	

RUBBER TECK, Inc. GARDENA, CALIFORNIA

Write for data sheets on the complete line

ENGINEERING SERVICE REPRESENTATIVES:

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8479 Higuera St., Culver City, Calif.
Texas 0-6836
5439 Harford Rd., Baltimore, Md.
Clifton 4-9671
60 East Bridge St., Berea, Ohio
Berea 4-7837

THOMSON ENGINEERING SERVICE
554 Summit, Fort Worth, Texas
723 Broadway, Wichita, Kansas
4378 Lindell, St. Louis, Missouri

RANDALL ASSOCIATES, INC.
Room 203, White Bldg.
Seattle, Wash.

For more details circle NED-27 J4 on enclosed inquiry slip

NEW EQUIPMENT DIGEST

BPA NBP

EQUIPMENT • MATERIALS • PROCESSES • DESIGNS • APPLICATIONS • LITERATURE

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Los Angeles 48.....6262 Commodore Sloat Dr.—WEbster 1-6865
F. J. Fuller
Los Angeles 57.....2330 W. Third St.—DUnkirk 7-4388
Robert W. Walker Co.
San Francisco 4.....57 Post St.—SUtter 1-5568
Robert W. Walker Co.

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In our CATALOGUE, you'll find the perfect CABINET for your particular requirement, whether it be for small parts storage, handling or display. 750 different combinations can be CUSTOM-BUILT at production line prices.

2.98 and up

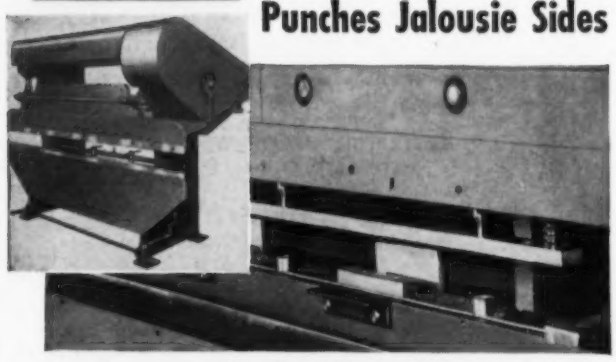
Send for CAT. JD-53-E

AKRO-MILS, INC. Box 989-E AKRON 9, OHIO

For more details circle NED-32 J4 on enclosed inquiry slip

Airtherm

METALWORKER Power Press Brake Punches Jalousie Sides



Another Example of METALWORKER Versatility

At the Efco Corporation, Midwest jalousie manufacturer, an Airtherm METALWORKER Power Press Brake handles the multiple punching operation—just one example of the variety of jobs that can be done on an Airtherm METALWORKER.

Machinery Division Airtherm MANUFACTURING COMPANY 716 South Spring Avenue • St. Louis 10, Missouri

Write for literature and the name of your nearest representative.

SERVING THE METALWORKING INDUSTRY SINCE 1931

For more details circle NED-28 J4 on enclosed inquiry slip

PROGRAM CONTROLLERS assure automatic process control of any time-temperature cycle

Function of Gardsman series JG pyrometric program controllers is to assure automatic process control of any time-temperature cycle with off-on, proportioning, high limit or stepless control action, plus scheduled secondary functions. In indicating system, current generated by thermocouple actuates millivoltmeter and controls pointer. In control system, setting pointer arm is moved along scale by cam driven by synchronous motor. Control is through use of flag on indicator which interrupts beam between photo cell and light source that is mounted on setting arm.

Secondary control enables user to start or stop cycle at any predetermined time, or to operate such auxiliary equipment as stepping relays, timers, blowers and alarms at any point in cycle. Made by **West Instrument Corp.**, 527 N. Noble St., Chicago 22, Ill.

For more details circle NED-30 J4 on enclosed inquiry slip

THIS CARBIDE GRINDING TEAM *Cuts Costs!*

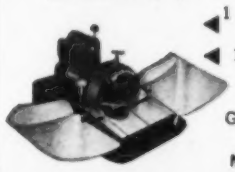
RESINOID-BONDED DIAMOND WHEELS
—for faster and freer carbide cutting and less frequent wheel dressing.

STEEL-BONDED DIAMOND WHEELS
—practically indestructible for extra long life. Diamond particles stay in place until completely worn. Finish tools better for longer tool life.

STEEL-BONDED CHIP-BREAKER DIAMOND WHEELS
—with many times the service life of other chip-breaker diamond wheels. Reduce wheel and tool costs materially and speed grinding 3-4 times.

CARBIDE BENCH GRINDERS

MODEL GF-2A (*Off-Hand*) ▼ MODEL GF-3 (*Universal*) ▶



◀ 1 H.P. Reversible Motor ▶
◀ 12 g.p.h. Pump ▶
Swivel Motor ▶
and Table ▶
Grinding, Cut-off, ▶
Chip Breaker ▶
Micro Scales for Close Settings ▶

THE Wickman MANUFACTURING CO. 10327 CAPITAL AVE. (OAK PARK) DETROIT 37, MICH.

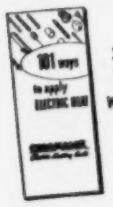
For more details circle NED-33 J4 on enclosed inquiry slip

CHROMALOX

THE *FIRST* NAME IN *Electric* HEAT

OFFERS YOU OVER 15,000 TYPES, SIZES AND RATINGS OF ELECTRIC HEATERS FOR ALL YOUR NEEDS

FAST • EFFICIENT • ECONOMICAL • EASY TO INSTALL



This Booklet Shows You How To Save Money with Electric Heat

It's packed with ideas you'll find useful. Get your copy now!

Regardless of your heating problems, there are Chromalox Electric Heaters that give you the heat you want when you want it. Compact Chromalox Units provide dependable, around the clock service; they are easily installed in existing or new equipment. Operating temperatures can be quickly regulated manually or thermostatically to fit the work requirements in your plant.

19-19

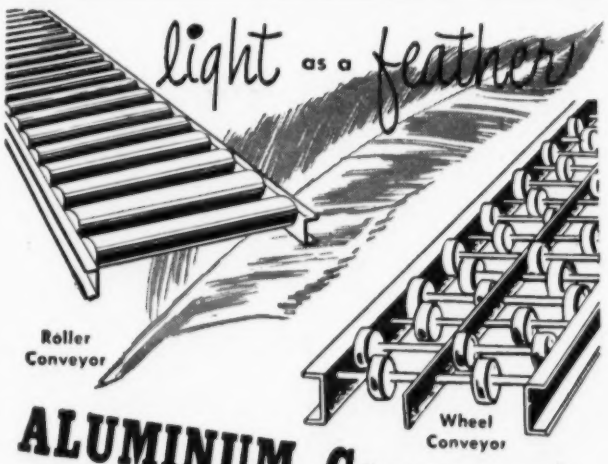
Industrial Div., EDWIN L. WIEGAND CO., 7509 Thomas Boulevard, Pittsburgh 8, Pa.

See other ad on pg. 75

CHROMALOX

ELECTRIC HEAT FOR MODERN INDUSTRY

For more details circle NED-29 J4 on enclosed inquiry slip



ALUMINUM Conveyors

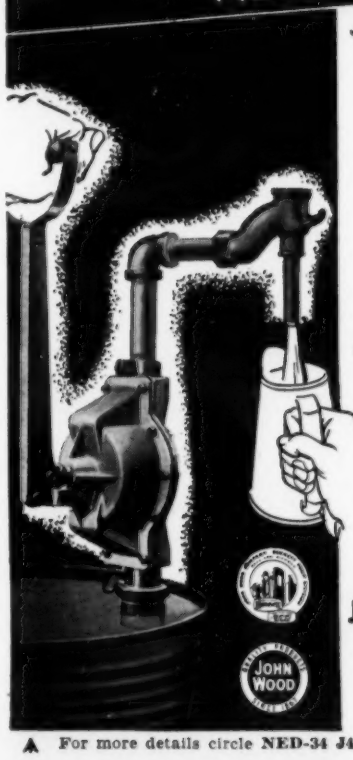
—have many advantages: *Light weight, easy-to-handle, easy to assemble.* Ideal where portable conveyors are desired.
Aluminum ROLLER Conveyor, available in several roll sizes, in lengths and roll spacing as required. Stock materials and parts permit quick shipment on made-to-order basis.
Aluminum WHEEL Conveyor, carried in stock complete for immediate shipment. In 12" or 18" widths with 10 wheels per foot.
Write for further information.

Logan Conveyors

LOGAN CO., 215 CABEL ST., LOUISVILLE, KY.

For more details circle NED-31 J4 on enclosed inquiry slip

ELIMINATE WASTE—MESS—HAZARD!



Pump it with NEW Bennett BIG "G"

DOUBLE ACTION PUMPS

For gasoline, lubricating oil, anti-freeze, turpentine, cutting oil and various solvents. Special models furnished with hose or spout, allow transfer of many other industrial liquids. *Let us know your liquid handling problems.*

JOHN WOOD COMPANY
Bennett Pump Division
Muskegon, Michigan
Offices in Principal Cities

For more details circle NED-34 J4 on enclosed inquiry slip

WHAT R-B PUNCHES SAVE...

If you use shoulder or set-screw type punches, you have excessive press down-time when replacing worn or broken punches.

But, with R-B interchangeable and standardized punches and die buttons you get quick insertion and removal in the press. The R-B ball lock features, that assure positive radial alignment and vertical locking without further keying, permit greater press utilization.

RICHARD BROTHERS PUNCH DIVISION
ALLIED PRODUCTS CORPORATION
DEPT. 72 • 12629 BURT ROAD • DETROIT 23, MICHIGAN

Also Produced in OTHER ALLIED PLANTS
SPECIAL COLD FORGED PARTS • STANDARD CAP SCREWS
PRECISION GROUND PARTS • SHEET METAL DIES MADE OF FERROUS ALLOYS, ZINC ALLOYS OR PLASTICS

▲ For more details circle NED-35 J4 on enclosed inquiry slip ▲

Write for bulletins on this rugged money-saving materials-handling equipment

Phillips equipment has proved its merit in thousands of applications everywhere. Ruggedly built and well designed, it withstands hard usage for longer periods. You'll profit by having Phillips literature on file.

Phillips
CORPORATION
(formerly Phillips Mine & Mill Supply Co.)
Manufacturers Since 1863
16 Arch Street, Carnegie, Pa.

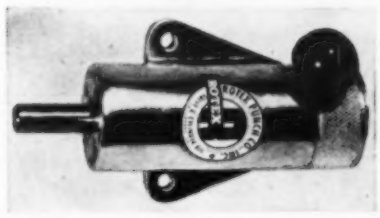
▲ For more details circle NED-36 J4 on enclosed inquiry slip ▲

AIR VIBRATORS
1 and 5-in. diameter sizes offered

Added to line of type F air-operated bin vibrators are 1 and 5-in. piston diameter sizes, making available eight different sizes. The 1-in. size is lightweight while the 5-in. vibrator is a heavy-duty long stroke unit for large bin applications where arching, bridging and sticking conditions are extreme. Units help in moving stubborn granular and powdered materials from wet sand to gravel, coal, cement, grain and chemicals. They operate on 25 to 100 psig continuous line pressure. Made by **Cleveland Vibrator Co.,** 2744 Clinton Ave., Cleveland 13, O.

▲ For more details circle NED-37 J4 on enclosed inquiry slip ▲

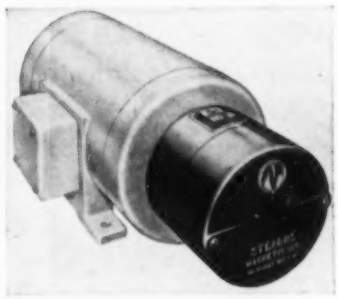
MIDGET AIR CYLINDER
operates at maximum of 160 psi



Valve-in-head midget air cylinder has a 1⅛-in. bore and a 1-in. stroke. Corrosion resistant body incorporates a hand lever valve. Cylinder is applicable to jig and fixture work and may be connected to any air outlet. Maximum operating pressure is 160 psi. Made by **Rotex Punch Co.,** 2350-N Alvarado St., San Leandro, Calif.

▲ For more details circle NED-38 J4 on enclosed inquiry slip ▲

MAGNETIC DISK BRAKE
for rerated 3 to 20-hp motors



Latest addition to line of redesigned magnetic disk brakes is model H-70 intended for use on rerated 3 to 20-hp motors. Unit is available in maximum torque ratings of 10, 15, 25, 35, 50, 70, 75 and 105-lb-ft. It is designed to mount on new frame sizes 213 through 286 and is up to 15/16-in. shorter than previous brakes. New feature is manual release-automatic reset wear indicator. The spring set solenoid released brake is supplied for either horizontal and vertical motor mounting or independent floor mount and can have standard or dust-tight, waterproof enclosures. Made by **Stearns Magnetic, Inc.,** 653 S. 28th St., Milwaukee 46, Wis.

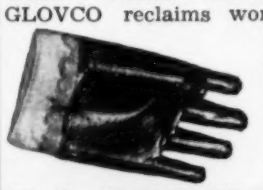
▲ For more details circle NED-39 J4 on enclosed inquiry slip ▲

DON'T THROW AWAY
WORN OUT
PLASTIC COATED GLOVES

GLOVCO's "Over-Kote" plan of cleaning, repairing and recoating makes them safe and good as new at fraction of original cost.

This is a new service that will save money for you. Plants are saving 90% of the plastic-coated gloves they once threw away. We guarantee satisfaction.

DON'T SCRAP LEATHER OR FABRIC GLOVES!
GLOVCO reclaims worn, dirty leather-faced gloves, welders' gloves, mitts, hand pads. Also hot mill, terry cloth, asbestos aprons and gloves, sleeves, drop cloths, etc. Service used in thousands of plants. Write for details of FREE trial demonstration.



U.S. INDUSTRIAL GLOVE CORP.
9352 Roselawn Ave., Detroit 4, Mich.

▲ For more details circle NED-40 J4 on enclosed inquiry slip ▲

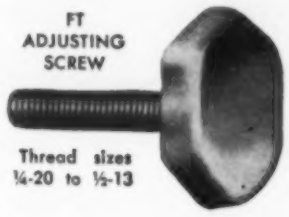
OHIO ADJUSTING SCREWS

—If your equipment provides for adjustment, Ohio Adjusting Screws make it easy—

ST THUMB SCREW
Thread sizes
#10-24 to ⅜-16

Shoulder, wide wing spread and threaded portion of one-piece construction. Easily adjusted with finger pressure.

The large base provides good gripping surface when hand adjusting is important.



FT
ADJUSTING
SCREW
Thread sizes
¼-20 to ½-13

SG SINGLE GRIP CLAMP SCREW
Thread sizes #10-24 to ½-13

Sturdy single-piece construction with collar to permit clamping.

Available in steel only. Can be furnished with zinc or cadmium plating.

Samples and information available upon request.

THE OHIO NUT AND BOLT COMPANY
608 Front Street Berea, Ohio

▲ For more details circle NED-41 J4 on enclosed inquiry slip ▲

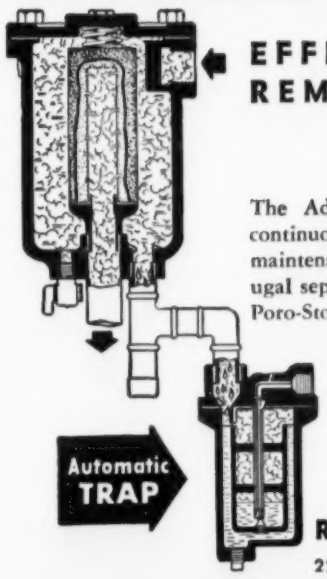
NEW "Lifetime" Dial Thermometers

You're *always* sure of accurate temperature readings with this new Foxboro "Lifetime" Dial Thermometer. Welded "one-piece" bulb and connecting capillary tubing of 316 Stainless Steel prevent corrosion from liquids, fumes or vapors. Needs no protective tubing. Tightly sealed 5" aluminum alloy case. Available in standard ranges to 1000°F. Easy-to-read scale 12" long. Write for details. **The Foxboro Company, 669 Neponset Ave., Foxboro, Mass., U.S.A.**

FOXBORO Reg. U.S. Pat. Off. DIAL THERMOMETERS

▲ For more details circle NED-42 J4 on enclosed inquiry slip ▲

Poro-Stone Filtration
FOR COMPRESSED AIR



EFFICIENTLY REMOVES:
OIL, WATER
PIPE SCALE

The Adams *Poro-Stone* Filter gives continuous service without attention or maintenance expense. Efficient centrifugal separation *plus* diffusion through Poro-Stone, removes contamination completely without pressure loss. Automatic Trap eliminates attention and assures continuous and efficient filter operation. Write for complete data—Bulletin 177.

R. P. ADAMS CO., INC.
227 E. Park Dr., Buffalo 17, N. Y.

ADAMS *Poro-Stone* AIR FILTER

▲ For more details circle NED-43 J4 on enclosed inquiry slip ▲

What do you know about the **Moly-sulfide** LUBRICANT?
A LITTLE DOES A LOT

You may have heard about a highly successful solid-film lubricant which is giving remarkable results in the shop and in the field.

In one 40-page booklet we have collected 154 detailed case-histories describing how difficult lubrication problems have been overcome by molybdenum sulfide. If you wish to be up to date about this solid-film lubricant, write now on your business letterhead for a free copy.

THE LUBRICANT OF MANY USES

Moly-sulfide
A LITTLE DOES A LOT
SEND FOR THIS FREE BOOKLET TODAY

Climax Molybdenum Company
500 Fifth Avenue · New York City 36 · N.Y.

For more details circle NED-44 J4 on enclosed inquiry slip

REMINGTON STUD DRIVER saves up to 80% on fastening costs... speeds up the job!

"I installed metal window frames and partitions in record time"—says one maintenance man about the Remington Stud Driver. And you quickly realize how he did it when you see this powder-actuated tool drive 4 and 5 studs per minute in steel and concrete. That means real savings in time and labor.

Compact and portable, the Stud Driver weighs only 6 pounds and requires no outside source of power. It's ready to *go*—any time, anywhere, even in confined places inaccessible to ordinary fastening methods. And with the power of its 32-caliber cartridge, you know a stud is set to stay!

What's your fastening job?

Whether anchoring wood plates to concrete floors or hanging radiator housings to concrete or brick—you can depend on the Remington Stud Driver to save you money. Send the coupon below for further information.

"If It's Remington—It's Right!"

Remington DU PONT

Listed & Approved by Underwriters' Laboratories, Inc.

MAIL THIS COUPON TODAY

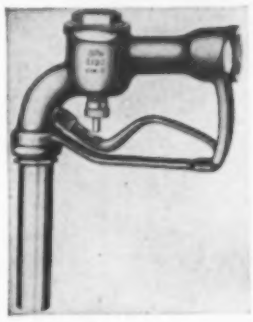
Industrial Sales Division, Dept. N.E.D.-9
Remington Arms Company, Inc.
Bridgeport 2, Connecticut

Please send me a *free* copy of the new booklets showing how I can cut my fastening costs.

*Name*_____
*Position*_____
*Firm*_____
*Address*_____
*City*_____ *State*_____

For more details circle NED-45 J4 on enclosed inquiry slip

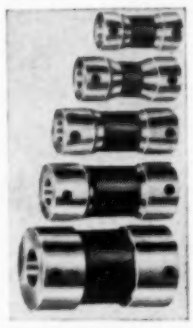
DISPENSING NOZZLE
for handling hazardous liquids



Body, cap, tube and disk holders of the model 2190 chemical dispensing nozzle are made of high tensile strength aluminum alloy, while lever pin, stem and main spring are of stainless steel. Upper and lower disks are Teflon. Heel of guard has three hold-open notches. Nozzle, with standard pipe threads on inlet and outlet ends, is designed for handling aqua ammonia, liquid nitrogen and acetic acid, but can be used to dispense petroleum and other chemicals that do not affect or are unaffected by aluminum or stainless steel. Made by **OPW Corp.**, Dept. NED, 2735 Colerain Ave., Cincinnati 25, O.

For more details circle NED-46 J4 on enclosed inquiry slip

FLEXIBLE COUPLINGS
bear ratings of 1/6 to 3 hp



Dyna-Line one-piece flexible couplings are unaffected in operation by grit, sand, weather, oil or grease. Central flex-element, to which shaft mounting fittings are secured, is of oil and heat resistant synthetic rubber compound with braided synthetic fiber reinforcing. Units are rated at 1/6, 1/3, 3/4, 1 1/2 and 3 hp. They are produced in standard lengths, but can be made in special lengths at no extra charge. All are available in bores-to-size, or with master bores and bushed-to-size, with keyways in applicable bores. Made by **Guardian Products Corp.**, 1255 E. Second St., Michigan City, Ind.

For more details circle NED-47 J4 on enclosed inquiry slip

SPEED REDUCERS
three designs have 13 sizes each

Redesigned C line of worm gear speed reducers features increased capacity and smaller size than original units. CB, CT and CV designs are each made in 13 sizes. First five sizes in 1/100 to 5-hp range, in ratios from 5:1 to 60:1, are now available, with others to be in production soon. All fulfill AGMA standards, having gears, bearings and shafts rated for AGMA Class 1 service. Surface area provides ample heat radiating capacity. Made by **Winsmith, Inc.**, 24 Eaton St., Springville, N. Y.

For more details circle NED-48 J4 on enclosed inquiry slip

UNIVERSAL METAL HOSE COMPANY
2155 South Kedzie Ave. • Chicago 23, Illinois

For more details circle NED-49 J4 on enclosed inquiry slip

CLEAN HANDS IN 60 SECONDS
WITH Hammons DISPENSERS IN WORK AREAS

Puts more man-hours on production, less in washroom
Workers like it

GETS ALL THE DIRT

Hammons WATERLESS SKIN CLEANER

Removes dirt, paint, grease, Permatex, etc. Contains U.S.P. grade lanolin, glycerin and hexychlorophene to guard against dermatitis.

HAMMONS PRODUCTS, INC.
1141 W. WILDWOOD, FORT WAYNE 6, IND.

For more details circle NED-50 J4 on enclosed inquiry slip

CENTRIFUGAL POWER ROOF VENTILATOR

Remove fumes and foul air from plants, duct systems and hoods with the General Centrifugal Power Roof Ventilator. Non-overloading centrifugal wheel is balanced for quiet, efficient operation on grease-lubricated ball bearings. Motor has vibration absorbing mounting and is located out of air stream. Heavy gage welded and spun steel construction assures long life.

General Roof Ventilators are available in copper, galvanized and stainless steel. Protective coatings are offered to meet needs for any type of corrosive service. This low silhouette roof ventilator features symmetrical design.

Air deliveries range from 900 cfm to 50,000 cfm.

Write for Bulletin CRV 101

GENERAL BLOWER CO. MORTON GROVE, ILL.
LUNGS FOR INDUSTRY
DESIGNERS — ENGINEERS — MANUFACTURERS OF FANS, BLOWERS EXHAUSTERS AND RELATED INDUSTRIAL EQUIP.

For more details circle NED-51 J4 on enclosed inquiry slip

View of Model 1405 with table removed

AIR-HYDRAULICS Heavy Duty Air Index Tables allow no backlash, skips or overruns because: both the cushioned stop and air speed are adjustable to compensate for variations in load weights and diameters • The index pin shifts to the next notch while table is stationary and is **only** disengaged by the locking dog **after** indexing • The locking cylinder insures firm seating of dog in ring notch • Air cushioned stop eliminates wracking jar

5 versatile sizes from 10" to 48" in diameter (Model 1405—15" dia. shown) • 4, 6, 8 or 12 station rings are standard, others up to 30 stations made to order • May be mounted vertically or horizontally on all types of presses or other tools requiring indexing • Operate on standard line pressures from 60-175 lbs.

Write today for new 14-page catalog covering presses, hammers, index tables and allied equipment.

AIR-HYDRAULICS INCORPORATED

231 BELDEN ST. • JACKSON, MICHIGAN

For more details circle NED-52 J4 on enclosed inquiry slip

DEGREASING MIRACLE!

How a Degreaser that "COULDN'T BE MADE" Cleans-up for YOU!

For many years, chemists tried in vain to eliminate cresylic acid (because of hazards) from heavy-duty degreasers and still maintain efficient cleaning action. Twelve years ago, Penetone's chemists found the secret and created NAVEE '42. To date, there is no equal to this product, even though others imitate the name. Customers call NAVEE '42 a degreasing miracle!

Navee '42 Works Instantly!

Photo shows how NAVEE '42, rinsed with water, leaves a perfectly clean surface—it instantly starts to dissolve preservative coatings, grease, oil, carbon stains, asphalt, tar, resins, printing inks, etc. Use it concentrated or even diluted with water. NAVEE '42 gives off no oppressive or dangerous fumes. May be used hot or cold. Try NAVEE '42 in your plant!

Eliminates Hazardous Cresylic Acid Products

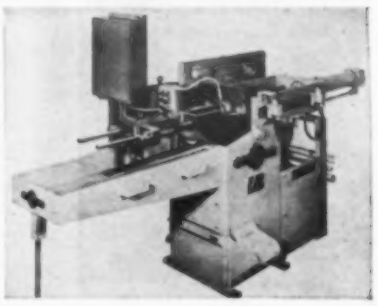
NAVEE '42 contains no cresylic acid. It is not only safer, but actually performs more efficiently than many types of products containing cresylic acid! Medical authorities agree contact with cresylic acid causes severe skin lesions, chemical burns and even impairment of vision. Death can occur from over-exposure! Cresylic acid has a maximum allowable concentration of 5 parts per million parts air—this limit is quickly exceeded in hot tank degreasing. NAVEE '42 eliminated all these hazards.

SEND FOR FULL INFORMATION!

the PENETONE co.
Box ND-954, Tenafly, New Jersey

For more details circle NED-53 J4 on enclosed inquiry slip

BROACHING MACHINE
horizontal-vertical model will do four different basic operations

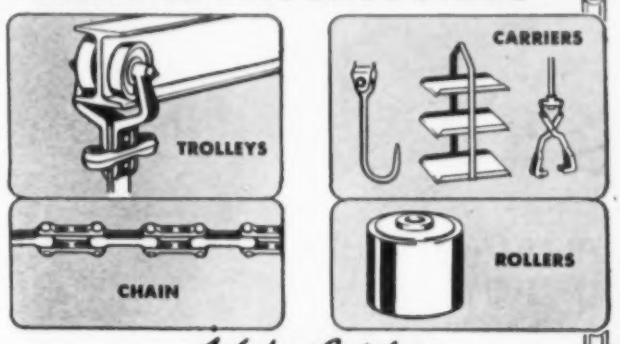


This versatile, multipurpose Colonial "4" broaching machine will handle push and pull-down broaching, vertical press operations, and will provide all advantages of horizontal broaching. Rated capacity is 6 to 8 tons. Horizontal and vertical positions of working bed are assumed by pivoting bed section about the top of the base by means of hydraulic lift cylinder. In horizontal position, chip pan containing guide support is attached to base.

Power for lift cylinder is supplied by hydraulic pump and motor unit mounted on separate base that also houses hydraulic fluid. This power unit can also be used as auxiliary hydraulic take-off for other uses. Integral with pivoting bed section is table for supporting work-holding fixtures. Floor space requirements in vertical position are 84 x 40 in. and 132 x 40 in. in horizontal position. Made by **Colonial Broach Co.**, P. O. Box 37, Harper Station, Detroit 13, Mich.

For more details circle NED-55 J4 on enclosed inquiry slip

WEBB CONVEYOR EQUIPMENT, PARTS and ACCESSORIES



Ask for Catalogs

No. 50—Trolley Conveyors
No. 51—Floor Type Conveyors
No. 52—Power & Free Conveyors
No. 453—Hand Pushed Trolleys, etc.

JERVIS B. WEBB CO.
Conveyor Engineers and Manufacturers
8921 ALPINE AVE. • DETROIT 4, MICH.
Offices In Principal Cities

For more details circle NED-58 J4 on enclosed inquiry slip

NEW VIBRATION MOUNTING TYPE SF

- Spring-Type
- Fully Enclosed
- Semi-Steel Housing
- Clog-Proof
- Factory Pre-Set
- Adjustable On The Job
- Built-in leveler

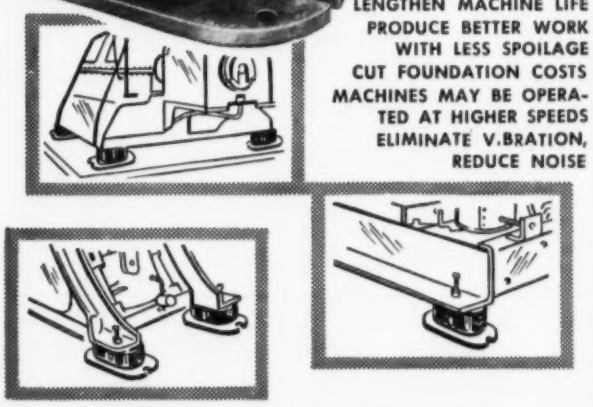
the ONE mounting that provides

isolation efficiencies approaching 100%

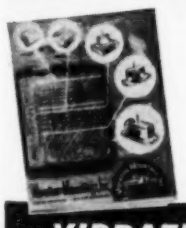
for ALL types of equipment!

IMPROVE YOUR PRODUCTION 6 WAYS!

PERMITS IDEAL MACHINE LOCATION
LENGTHEN MACHINE LIFE
PRODUCE BETTER WORK WITH LESS SPOILAGE
CUT FOUNDATION COSTS
MACHINES MAY BE OPERATED AT HIGHER SPEEDS
ELIMINATE VIBRATION, REDUCE NOISE



COMPLETE LINE OF CORK, RUBBER, & FELT VIBRATION ISOLATING PADS



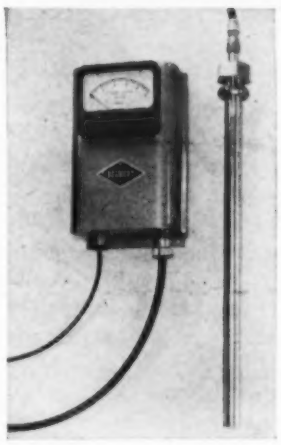
STEEL SPRING MOUNTINGS

Write today for Vibration Engineering Data Book & Catalog

VIBRATION MOUNTINGS, INC.
76-21 Queens Blvd., Elmhurst, L. I., N. Y.

For more details circle NED-54 J4 on enclosed inquiry slip

LEVEL INDICATOR
for liquids and condensed gases uses capacitive sensing probe

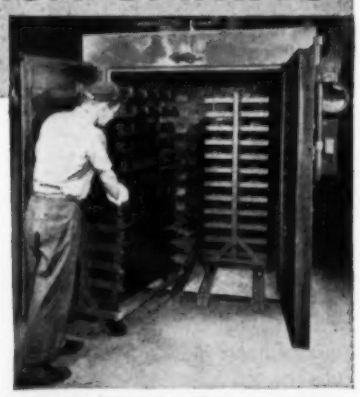


Continuous indication of level of wide range of materials in storage or process can be provided by Belmont level indicator. It utilizes a capacitive type sensing element probe and is suitable for use with most nonadhesive chemicals, milk, oils, refrigerants such as ammonia and the Freons and all condensed gases. Instrument operates over range of −425 to 500° F and from vacuum to 100,000 psi.

Various probe lengths, materials and designs are available to cover different ranges in rise and fall of materials, character of substances encountered and problems of sanitation and nonentraining requirements of relatively viscous materials. Standard provision is for 10-ft separation of probe and equipment housing, but, with coaxial cable, distance can be up to 1000 ft. Made by **Thermo Instruments Co.**, 1310 County Rd., Belmont, Calif.

For more details circle NED-56 J4 on enclosed inquiry slip

FAST FINISH BAKING



Refinished Relay Covers and other Control Parts Formerly Air Dried in 8 Hours. • Now they get a better wrinkle finish baked on in ONE HOUR.

Despatch R-S FINISH BAKING OVEN

● Minneapolis-Honeywell Regulator Co. uses the above Despatch R S Oven for refinishing of controls sent in for repair. The black wrinkle enamel on the relay cover shown is baked to an extremely hard, durable finish in 1 hour at 300° F. saving 7 hours of former air drying time! Other parts are baked ½ hour at 350° F. This fast baking of finishes speeds up the entire repair program, improves service to customers.

Despatch R S Ovens are well insulated, very economical, 100% controlled for uniform heat up to 500° F., with temperature variation seldom more than 3° ± F. Built in a range of sizes for a great variety of applications.

Write for Bulletin on R S Ovens.

DESPATCH OVEN CO. Established in 1902

Manufacturers of ovens for: Paint Finishing, Dehydrating, Curing, All Industrial and Laboratory Applications

325 DESPATCH BLDG., MINNEAPOLIS 14, MINNESOTA

For more details circle NED-57 J4 on enclosed inquiry slip

FAR LESS TIP BREAKAGE with "RING SEAT" CENTER DRILLS

USE "RING SEAT" CENTER DRILLS

IF YOU GRIND BETWEEN CENTERS

The "R" type, curved contour Ring Seat center drills give you a stable, accurate, precision center, quickly restored after heat-treat.

Ring Seat center drills produce a protected center at no extra cost—and carry a built-in discount because they last longer.

Lapping Centers After Heat Treat

is a simple quick operation, done in about one-third the usual time. Lapping with a rotating felt wick removes heat scale and restores a perfect center—at the original place.

A PREMIUM DRILL AT NO EXTRA COST

Ideal for Turning Tapers

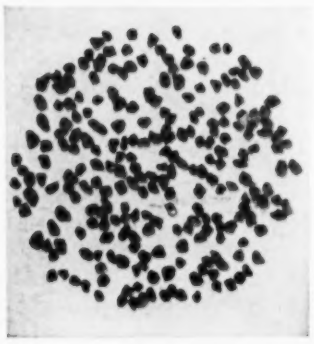
LINK INDUSTRIES
13838 Elmira Detroit 27, Mich.

FREE CIRCULAR

For more details circle NED-59 J4 on enclosed inquiry slip

Additionally Processed Aluminum Oxide

ABRASIVE GRAIN



for
★ POLISHING
★ GRAINING
★ BLASTING
★ TUMBLING

Our Aluminum Oxide Abrasive is heat annealed for extra temper and toughness; also factory milled to remove weak edges. Unretouched photo shows the strong, chisel-sharp grits. Sizes from 10 to 240. Can be used over and over again to save you money. Low initial cost. Send coupon today.

ABRASIVE PRODUCTS CO., Lansdowne, Pa.

Send me FREE sample in grit size No. _____
Name _____ Title _____
Address _____
City _____ Zone _____ State _____

For more details circle NED-60 J4 on enclosed inquiry slip

YOU NEED A . . .

DUPOR WATER COOLED

SMOKE MASK

A complete combination of respirator and goggles that provides lung and eye protection for painters, foundrymen, smelters, oil refiners, chemists, firemen, etc. The respirator is water-conditioned with all incoming air passing through cool, clear water. The goggles are the famous "Nod & Shake" fog-proof and gas-tight type. No finer protection, anywhere! Order sample today, $5.00 postpaid.

H. S. COVER, SOUTH BEND, IND.

"Respirators for Industry since 1894"

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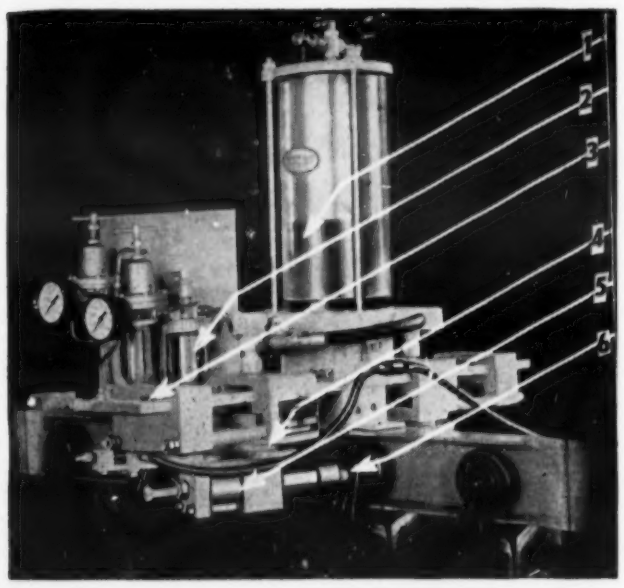


1. Lubricant Reservoir
2. Air Control Panel (filter, regulator, lubricator unit)
3. Frame completely adjustable
4. Cam—locates nozzle
5. Booster Air Cylinder
6. Nozzle & Pick-up Assembly

700 series

CONVEYOR LUBRICATOR
injects oil or grease automatically

Features:

(a) The 700 series FAUVER AUTOMATIC LUBRICATOR handles a complete range of lubricants, from light oils to heavy fibre greases.

(b) The process of lubrication is entirely automatic and adjustable

(c) The Lubricator is smooth and quiet in operation and the only power required is air. The actuation of the pumping units is dependent only upon the conveyor itself.

(d) No down-time for servicing the conveyor due to lack of poor lubrication. The human element is eliminated and every bearing is assured of lubrication.

(e) Maintenance is reduced because each wheel bearing is positively lubricated; power consumption is reduced because a properly lubricated bearing will not create any drag on the drive.

(f) Compact design. All parts are easily accessible for adjustment. Reservoir is easily refilled.

Send for complete information and engineering data.

J. N. FAUVER COMPANY, INC.

51 W. HANCOCK • DETROIT 1, • MICHIGAN

▲ For more details circle NED-78 J4 on enclosed inquiry slip ▲

STEEL POCKET TAPES
with inch and foot-and-inch markings

Entire line of Evans steel pocket tapes now features dual marking system which enables user to take readings in inches or in feet and inches without having to convert from one to the other. Tapes with the marking system include standard-width 6, 8, 10 and 12-ft models and 10-ft model with ¾-in. wide blade for extra rigidity. One edge is marked off in inches, from 1 to 72, 96, 120 or 144, depending upon tape length. Calibrations are in 1/16-in., with first 6 in. in 1/32-in. Other edge is marked in feet and inches with calibrations of ⅛-in. Made by **Evans & Co.**, Dept. NED, Elizabeth, N. J.

▲ For more details circle NED-79 J4 on enclosed inquiry slip ▲

PENCIL TYPE GRINDER
has finger tip speed control

Quarter turn in either direction moves the speed control valve of the improved air powered Nu-Jett pencil grinder from full open to completely shut off position. Control is flush integral part of back cap assembly of the grinder and is within easy reach of user's thumb. Grinder weighs under 6 oz, is 5⅛ in. long and runs at a minimum speed of 100,000 rpm. Collet guard precludes using an oversize mounted point or cutting tool and protects the fingers from contact with the rotating collet. It also directs a stream of air upon the cutting tool to keep the work clean. Grinder is furnished with a Filter-lubricator employing a Bendix-Skinner micronic filter element. Price is $42.50. Made by **Air Equipment Corp.**, 1356 Michigan St. N.E., Grand Rapids, Mich.

▲ For more details circle NED-80 J4 on enclosed inquiry slip ▲

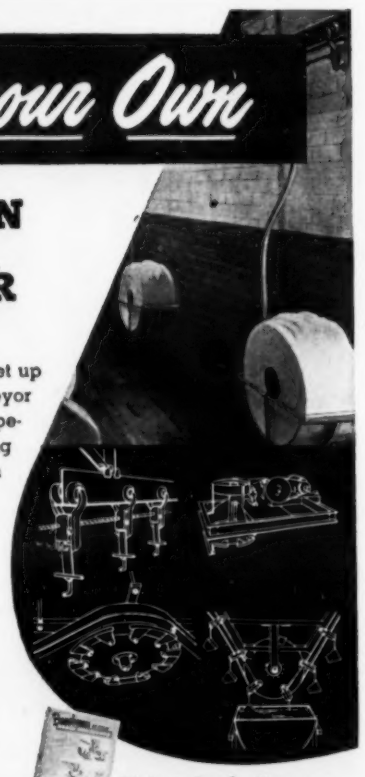
Hard-Facing Materials & Process

Mir-O-Col Alloy Co.—Study of hard-facing, its application and wear-resisting qualities wherever impact and abrasive conditions exist, is contained in 72-page pocket-size brochure. Latest data and instructions on hard-facing and line of hard-facing metals are included. Recommendations for over 1000 individual pieces of equipment subject to impact and abrasion are incorporated, along with an extensive technical data section.

▲ For more details circle NED-81 J4 on enclosed inquiry slip ▲

Make your Own

BUSCHMAN CABLE CONVEYOR SYSTEM



Now . . . your crew can set up an overhead cable conveyor system tailored to your specific requirements using pre-engineered Buschman standard components. Efficient Bush-Lock and Snub-Lock designs are available in ¼" and ⅜" sizes . . . lightweight, all-bolted construction . . . easily rearranged to meet changing needs.

PRODUCE MORE FOR LESS — Buschman Conveyors

C-159-EWR

Write today for literature

REPRESENTATIVES IN PRINCIPAL CITIES

THE E. W. BUSCHMAN COMPANY
4482 Clifton Avenue • Cincinnati 32, Ohio

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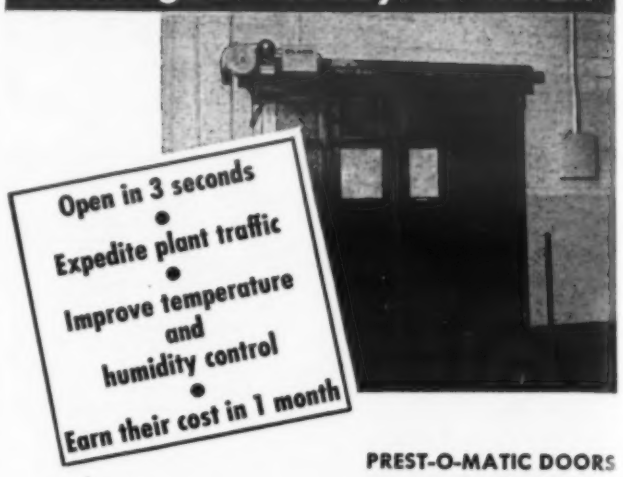
AUTOMATIC DOORS
Packaged—Ready to Install



PREST-O-MATIC DOORS open automatically in as little as 3 seconds. Complete safety. Fork lift truck driver pulls cord*, door opens, he drives through without slowing down, again pulls cord, door closes. Prevents drafts. Improves critical temperature and humidity control. Completely packaged—quickly and easily installed. Pays for itself quickly. Send for new booklet.

**Other type controls available.*

CLARK DOOR COMPANY, Inc.
511 Hunterdon St., Newark 8, N. J.

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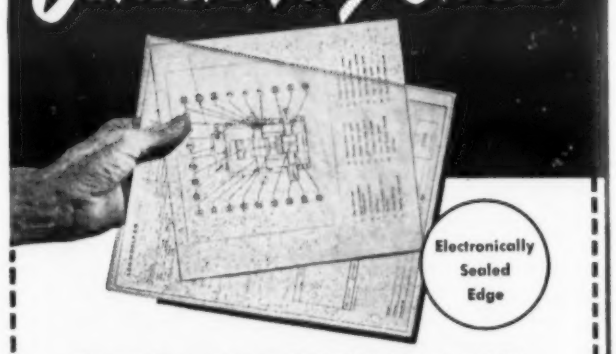
PACIFIC-VINYL
The NEW Blueprint and Shop Envelope
Outlasts Any Other!



Save replacement costs. Pacific-Vinyl does not get brittle, does not tear, scratch, or wrinkle. Outlasts ordinary holders many times...because it is made of tough, transparent 12 gauge Vinyl plastic with electronic edge sealing instead of the usual edge stitching.

Increase efficiency. Pacific-Vinyl is glare-free, gives clear vision of the contents, resists acid and moisture.

Introductory special. Quantity of 50, shipping charges prepaid. 7" x 10" size, $15.00. 10" x 12½" size, $17.50. Satisfaction guaranteed or your money promptly refunded.

Free sample. A request on your letterhead does it. Write for further information on other sizes, prices, and quantity discounts.

PACIFIC PLASTIC PRODUCTS
Dept. N, 6402 Crenshaw Blvd., Los Angeles 43, California

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CAPACITIES UP TO 1950 HORSEPOWER

W. A. JONES FOUNDRY & MACHINE CO.
4473 Roosevelt Road, Chicago 24, Illinois

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Jones *Better Drives ...Since 1890*

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J-4

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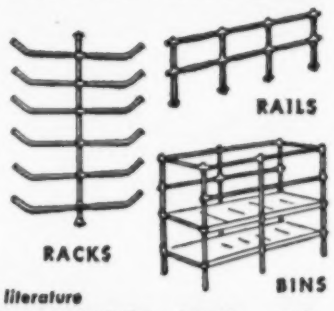

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THE HOLLAENDER MFG. CO.
3840 Spring Grove Ave., CINCINNATI 23, OHIO

For more details circle NED-86 J4 on enclosed inquiry slip

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Make Tools Shock-Proof In Minutes!

Just dip—drain—dry! Insl-x Tool Dip is the first and only easy, permanent, attractive way to insulate tools. No more handles to tape; no groping around for taped tools. Dip handles in Insl-x, drain, and dry, and you're protected FOREVER!

You'll be amazed! Insl-x coats tools with a beautiful hard wearing finish that looks molded on, and won't ever chip or peel. Bright red or black color helps you spot insulated tools in no time.

No wonder Insl-x has been used in bulk by the largest utilities, railroads, subways, etc., for twelve years. AND NOW IT'S AVAILABLE FOR THE FIRST TIME IN A HANDY 6-OUNCE CONTAINER ESPECIALLY DESIGNED FOR YOUR NEEDS.

Coat pliers, wrenches, screw drivers, bolt tools, wire cutters, handles, rods, and shafts, all from the same can.

Spray On Protection In No Time!

Just press the button! You'll get a thick, hard, flexible film that insulates everything it touches. Not a household toy. A truly professional product used by large manufacturers. NOW AVAILABLE TO YOU for the first time in convenient spra-tainers.

You'll see hundreds of uses for this wonder spray the very first time you carry it. Spray buss bars, pigtails, permanent connections, transformers, motor controllers, switchgear, and even fuse boxes. Use it as spot protection against rust and corrosion too!

Get the Facts . . . Free Write now for data sheets on Insl-x Insulating Spray and Tool Dip, plus a list of suppliers in your area! No cost, no obligation.

These are just two of a broad group of compounds developed by Insl-x which display unusual electrical characteristics.

insl-x

INSL-X SALES COMPANY • 26 Rittenhouse Place, Ardmore, Pa.

For more details circle NED-87 J4 on enclosed inquiry slip

PERCENTAGE TIMERS
for stepless temperature control

Design improvements provide longer life and simplify operation of ATC percentage timers, which furnish precision stepless temperature control for furnaces, ovens and other equipment. Molded nylon timing cams and contact arms reduce noise and friction. Motor rotor is oiled for life. Dial settings are unaffected by vibration and larger contacts carry heating loads up to 4.6 kw without external contactors. Either unenclosed or explosionproof styles with external dial are available, surface or flush mounted. Timers switch power on and off for the required percentage of recurring 60-second cycles. Dial setting at 25 per cent puts power on 15 seconds and power off 45 seconds. It is calibrated from 0 to 100 per cent "on" time. Made by **Automatic Temperature Control Co.,** 5206 Pulaski Ave., Philadelphia 44, Pa.

For more details circle NED-88 J4 on enclosed inquiry slip

HARDNESS TESTER
automatic unit performs 1000 to 1200 Rockwell tests per hour

Between 1000 and 1200 tests per hour can be made by this fully automatic Rockwell hardness tester for all ferrous and nonferrous metals. Pieces are fed into tester and automatically placed in position beneath diamond penetrator. Testing loads are applied and removed, with resulting hardness indicated on dial. Minute photoelectric transistors pick up indication and transfer reading to impulses. Latter actuate relays, which in turn classify material according to correct hardness.

Control regulates up and down travel of elevating screw to accommodate pieces of varying thickness. Controls to limit dwell time at end of screw travel and to control length of time pointer remains at hardness position are also available. Made by **American Chain & Cable Co.,** Wilson Mechanical Instrument Div., Dept. NED, 230 Park Ave., New York 17, N. Y.

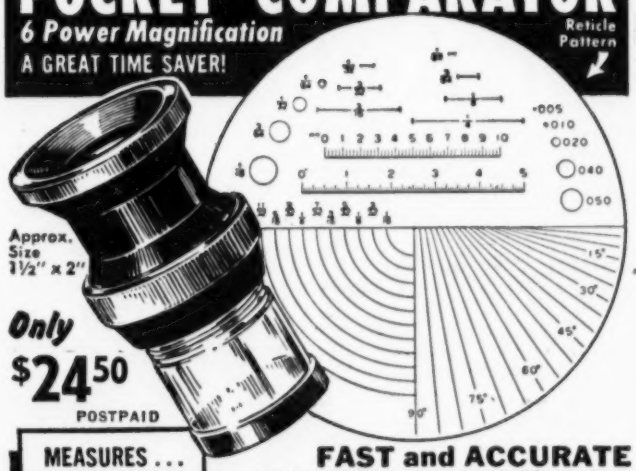
For more details circle NED-89 J4 on enclosed inquiry slip

CHECK, MEASURE, INSPECT with this HANDY

POCKET COMPARATOR

6 Power Magnification

A GREAT TIME SAVER!



Only $24.50 POSTPAID

MEASURES . . . ANGLES • RADII CIRCLES LINEAR DIMENSIONS In both decimal inches and mms.

Dealer Inquiries Invited

FAST and ACCURATE
On Small Parts . . . Small Dimensions

First time available at such low price! EDSCORP POCKET COMPARATOR. Fine, imported measuring magnifier—for fast, accurate inspections. Black anodized metal cell. Clear plastic base. Focusing adjustment. Used to check layouts, machining on tools, dies, gauges — to check threads, chamfers, small holes. In optical work for checking flaws. Instrument comes in protective leather case. We guarantee complete satisfaction or your money back . . .

Order Stock No. 30,061-AE . . . $24.50 postpaid. Send check or M.O. or order on open account.

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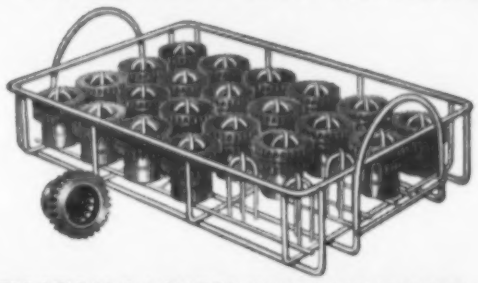
If you haven't seen our big, FREE Catalog, you don't know what you're missing. Fantastic variety—never before have so many lenses, prisms, optical instruments, and components been offered from one source. Positively the greatest assembly of bargains in all America. Imported! War surplus! Telescopes! Microscopes! Hand Spectroscopes, Prisms, Lenses, Reticles, Mirrors and dozens of other hard-to-get optical items. Write for FREE CATALOG "AE".

EDMUND SCIENTIFIC CORP., Barrington, N. J.

For more details circle NED-90 J4 on enclosed inquiry slip

EEZY-STAK BASKETS
for Better Parts Handling



EEZY-STAK BASKETS SIMPLIFY PARTS HANDLING...CUT COSTS...REDUCE REJECTS!

WIPCO manufactures a complete line of Custom-Designed stacking (Eezy-Stak) and non-stacking baskets for handling all types of parts through every production and assembly process. WIPCO baskets can be made in any desired size or shape, and from any practical material.

Eezy-Stak baskets feature the exclusive Interlock Handle* which permits easy and safe stacking. Eezy-Staks are available in a wide range of standard sizes and metals which fit most parts-handling requirements. Write today for Bulletin B-54.

*Pat. No. 2646186

WIPCO BASKETS . . . FROM INITIAL MACHINING TO FINAL ASSEMBLY AND SHIPPING

WIRE AND IRON PRODUCTS INC.
1727 SIXTEENTH ST. • DETROIT 16, MICHIGAN

For more details circle NED-91 J4 on enclosed inquiry slip

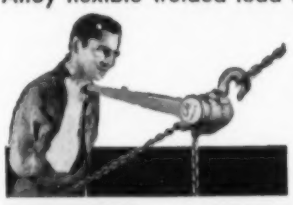
LIFTS and PULLS at ANY angle . . .

Move machinery, pull boiler tubes, join belts, set pipe, lift motors—for 1001 uses pick up a

¾ TON MODEL WEIGHS ONLY 13 LBS.

CM PULLER

• Operated by a ratchet handle requiring no more effort than an automobile jack. Objects up to 12,000 lbs. can be lifted or pulled ...vertically, horizontally or at any angle. Anyone can operate. Automatic brake holds loads at any point. Inexpensive. Sturdy. Safe. Herc-Alloy flexible welded load chain.



Send for PULLER Bulletin 146 Illustrated and with prices.

Capacities: ¾ to 6 ton

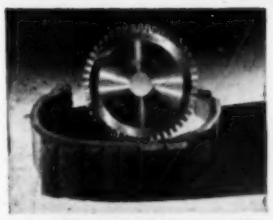
CM HOISTS AND CHAIN

CHISHOLM-MOORE HOIST DIVISION
COLUMBUS McKINNON CHAIN CORPORATION
TONAWANDA, NEW YORK
DISTRICT OFFICES: NEW YORK, CHICAGO, CLEVELAND
In Canada: McKinnon Columbus Chain Limited, St. Catharines, Ontario

For more details circle NED-92 J4 on enclosed inquiry slip

HYDE ENGINEERS CAN HELP YOU

reduce your cutting tool costs now



RUBBER CIRCULAR KNIVES AND HAND CUTTING TOOLS

LEATHER CUTTING TOOLS OF EVERY DESCRIPTION

VEGETABLE AND FOOD PACKERS KNIVES

HOME AND INDUSTRY FOOD SLICING KNIVES

WRITE FOR SPECIFICATION CHART

HYDE MANUFACTURING CO. SOUTHBRIDGE, MASS.

For more details circle NED-93 J4 on enclosed inquiry slip

immediate delivery

SHEAVES • FLAT BELT PULLEYS • HANGERS
PILLOW BLOCKS • COUPLINGS • BEARINGS
COLLARS • "SURE-GRIP" SHEAVES AND PULLEYS • "SURE-GRIP" STANDARD, SUPER AND STEEL CABLE V-BELTS • COMPLETE DRIVES
VARIABLE SPEED DRIVES

T. B. Wood's SONS COMPANY

1195 Fifth Avenue Chambersburg, Pa.

Cambridge, Mass., Newark, N. J., Dallas, Tex., Cleveland, Ohio

For more details circle NED-94 J4 on enclosed inquiry slip

THERE'S A STURDY
BURKE
FOR EVERY PURPOSE

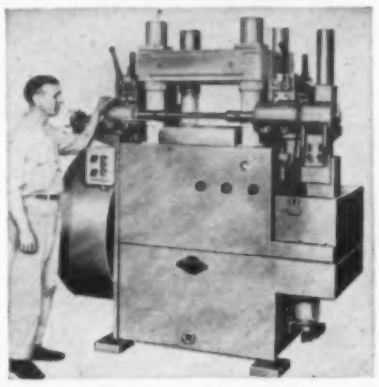
Thousands of efficient, low cost Burke Bench Millers are proving their superiority in Tool, Development and School Shops and a wide variety of mass production operations.

Send for complete data on models attachments, accessories and suggestions for putting Burke's to work for your profit.

THE U. S.-BURKE MACHINE TOOL DIV.
Brotherton Road 2, Cincinnati 27, Ohio

For more details circle NED-95 J4 on enclosed inquiry slip

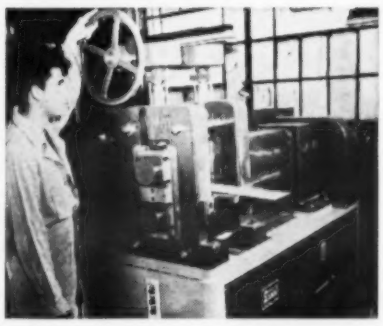
HIGH SPEED PRESS delivers 300 1-in. strokes/minute



This 75-ton, high speed production press with maximum stroke length of 4 in. will handle unbalanced dies without distortion. Press will deliver 1-in. strokes at speed of 300 per minute; 2-in. strokes at 200 per minute. Strokes can be inched, single or continuous, by means of air clutch and brake combination. Right to left clearance between columns is 19 in., front to back, 15 in. Other sizes, right to left between columns, are available in multiples of 6 in. All moving parts are force-feed lubricated, and all controls are electrical. Point loading of 75 tons can be handled anywhere along center line of machine, right to left, column to column. **Alpha Press & Machine, Inc.,** Dept. 3, 9281 Freeland Ave., Detroit 28, Mich.

For more details circle NED-96 J4 on enclosed inquiry slip

SMALL ROLLING MILL converts rapidly from two-high to four-high configuration



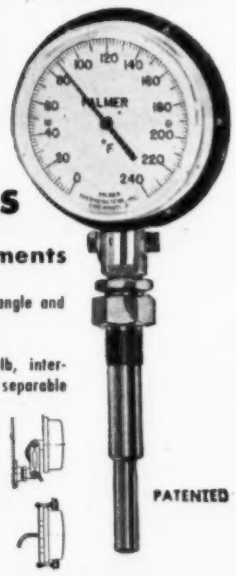
Rapid conversion of this combination rolling mill from two-high to four-high configuration enables it to reduce an ingot through the sheet stage to foil. Heavy duty mill can be used for bar, rod and strip reduction and performs hot flat rolling at up to 1000° F, cold flat breakdown, cold flat finishing on either two-high or four-high setup, and hot or cold rolling of wire and shapes.

To change configuration to four-high, large rolls are separated and two smaller work rolls are inserted between large ones, which then become backup rolls. Machine is available with 1½-in. diameter work rolls and 5-in. diameter by 8-in. face backup rolls, or in larger size with roll dimensions of 2¼ in. and 8 x 8 in.

Depending on required range and speeds of reduction, mill can be powered by constant speed ac motor, a four-speed gearshift ac drive, an eddy-current clutch variable speed ac drive, or a variable speed dc drive. It can be equipped with lubricant circulating, cooling and filtering system. Made by **Stanat Mfg. Co.,** 47-30 37th St., Long Island City 1, N. Y.

For more details circle NED-97 J4 on enclosed inquiry slip

PALMER
MERCURY ACTUATED
DIAL THERMOMETERS
in 3 types to suit any requirements



Full 4½" dial face. Stem can be placed at any angle and case can be rotated to any readable position.

1 **Rigid Stem Dial Thermometer** tapered bulb, interchangeable with standard industrial thermometer separable socket. (As illustrated above.)

2 **Wall Mounted Dial Thermometer** with flexible connecting armor. Case adjustable to easy reading position.

3 **Flush Mounted Dial Thermometer** for panel mounting with flexible connecting armor.

All three types have a full 4½" dial face.

PATENTED

for accuracy: Mercury actuated . . . Fully Compensated by Invar Compensation. Guaranteed Accurate 1 scale division.

for angularity: Can be adjusted to most readable position at any angle desired.

for readability: Bold Black Numbers . . . 11" of scale Reading Dial face can always be placed in easiest readable position.

for interchangeability: Always specify "PALMER" Separable sockets as they are interchangeable for Dial or Industrial type Thermometers.

WRITE FOR CATALOG INFORMATION

PALMER THERMOMETERS, INC., Cincinnati 12, Ohio
Mfrs. of Industrial Laboratory Recording and Dial Thermometers

For more details circle NED-98 J4 on enclosed inquiry slip

Profits.. That make the WHEELS GO 'ROUND

Rubber-cushioned Brightboy Abrasive Wheels are going 'round and 'round—gaining acceptance among a rapidly increasing number of users—for metal working and for machinery maintenance.

BURRING, FINISHING, CLEANING, POLISHING IN ONE OPERATION: *time savings frequently as much as 50%.*

* **GREATER VARIETY OF GRAIN - AND - TEXTURE COMBINATIONS,** specially matched abrasive and rubber formulas for your jobs.

UNBELIEVABLE WORKING - ACTION AND ADAPTABILITY. Goes far beyond other methods. Brings you an entirely new concept of *a wider range of finer finishing!*

* NEW!

BRIGHTBOY NOW AVAILABLE IN EITHER ALUMINUM OXIDE OR SILICON CARBIDE GRAIN
and—
Each of these compounds comes in grain sizes ranging all the way from extra coarse to extra fine, in soft, firm and tough rubber binders.

Also made in a full range of accessory products: wheels, sticks, rods and blocks for machine and manual operations.

TRY A TEST! Pick up a few Brightboy wheels, along with Brightboy literature, from your dealer. Write us for it if he cannot supply you—and on any problem where finishing is involved.

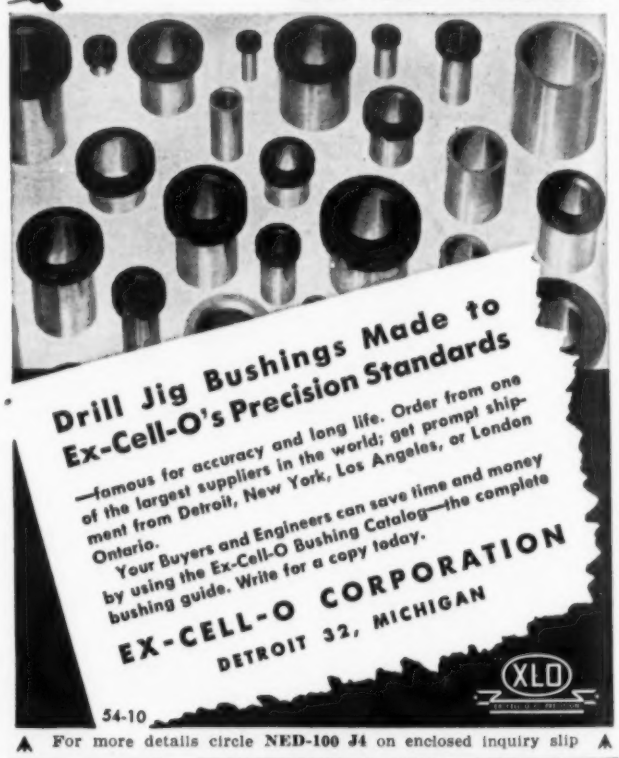
WELDON ROBERTS Brightboy RUBBER CUSHIONED ABRASIVES

BRIGHTBOY INDUSTRIAL DIVISION
WELDON ROBERTS RUBBER CO.
95 North 13th Street, Newark 7, N.J.

America's Pioneer Manufacturer of Rubber-Bonded Abrasives.

For more details circle NED-99 J4 on enclosed inquiry slip

QUICK ACTION ON ANY ORDER



Drill Jig Bushings Made to Ex-Cell-O's Precision Standards

—famous for accuracy and long life. Order from one of the largest suppliers in the world; get prompt shipment from Detroit, New York, Los Angeles, or London Ontario.

Your Buyers and Engineers can save time and money by using the Ex-Cell-O Bushing Catalog—the complete bushing guide. Write for a copy today.

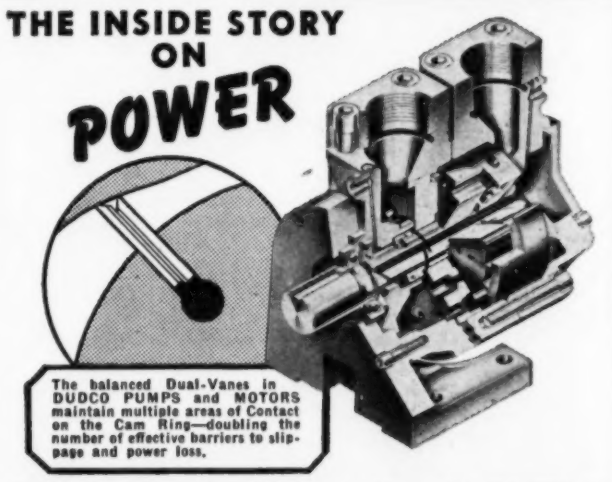
EX-CELL-O CORPORATION
DETROIT 32, MICHIGAN

XLO

54-10

For more details circle NED-100 J4 on enclosed inquiry slip

THE INSIDE STORY ON POWER



The balanced Dual-Vanes in DUDCO PUMPS and MOTORS maintain multiple areas of Contact on the Cam Ring—doubling the number of effective barriers to slippage and power loss.

Bulletin No. DP-300 Gives You the FACTS on DUDCO DUAL-VANE HYDRAULIC PUMPS

DUDCO Vane Type PUMPS feature the exclusive Dual-Vane principle because it is the key to complete hydraulic balance and the elimination of excessive slippage and power loss. With single models of 3 to 60 gpm and double models with capacities from 24 to 120 gpm, DUDCO Pumps afford design engineers the advantages of equipment providing continuous pressures to 2000 psi.

WRITE for BULLETIN DP-300 . . . profusely illustrated . . . tells the entire story.

DUDCO DIVISION
THE NEW YORK AIR BRAKE COMPANY
1708 EAST NINE MILE ROAD • HAZEL PARK • MICH.

For more details circle NED-101 J4 on enclosed inquiry slip

PORTABLE HARDNESS TESTERS

RIEHLE portables test *inside and outside* surfaces of parts inaccessible or difficult to test on bench machines. Riehle testers weigh but a few pounds and come in handy carrying cases. They save the expense and time of cutting samples from heavy parts. Testers simply clamp onto specimens.

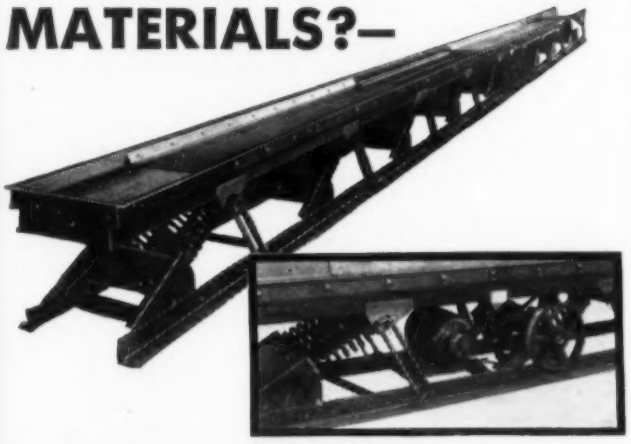
Riehle Portable Hardness Testers eliminate "conversion" errors by using standard Rockwell indentor and loadings. Scales: A, B, C, D, F and G. Capacities: up to 12" diameter or thickness.

RIEHLE TESTING MACHINES
Division of American Machine and Metals, Inc.
East Moline, Illinois

FREE BULLETIN WRITE DEPT. NED-954

For more details circle **NED-102 J4** on enclosed inquiry slip

HANDLING "TOUGH" MATERIALS?—



Left Top: *A 60' Carrier Natural-Frequency screening conveyor for clay products, with 24" pan made of ¼" steel plate. Capacity: 100 tons of 100-pound material per hour. 5 H.P. drive. Middle section of screen removed to show supporting bridge.*

Above: *Close-up of drive—note patented drive linkage which always places weight of vibrating pan and conveyed materials on the spring supports, and never allows these loads to be imposed on the eccentric shaft and bearings.*

Handling anything Hot, Sharp, Powdered, Oily, Abrasive, Sticky, Granulated or Stringy?

CARRIER Natural-Frequency Conveyors work on a unique, patented vibrating principle which permits them to handle many materials that are too "tough" for most screw, belt, apron, vibrating and other conventional types of conveyors. These spectacular new conveyors also substitute the natural resonance action of coil springs for brute force. Result—*a tremendous reduction in power . . . far less wear-and-tear . . . and an absolute minimum of maintenance and down-time!*

Carrier Natural-Frequency Conveyors—including vertical vibrating spiral types—are now racking up amazing conveying records for scores of America's biggest, most successful industrials. Let us prove to you that they will move *your* product more quickly, efficiently and economically. *Write for Bulletin 111—no obligation of course!* Carrier Conveyor Corporation, 2112 Frankfort Avenue, Louisville 6, Kentucky.

CHECK THESE CARRIER ADVANTAGES!

HIGH CONVEYING SPEED (Up to 100 feet per minute)
GREATER CAPACITY (Up to 200 tons per hour)
LESS POWER REQUIRED (About one-third as much as "competitive" equipment)
LESS MAINTENANCE & DOWN-TIME (Less power + good design = trouble-free performance)
NO DAMPENING UNDER LOAD (Designed with extra power for specified load, with positive stroke)
SELF-CLEANING (Continuous, smooth trough—no pockets)
COMBINES PROCESSING WITH CONVEYING (Can screen, dry, cool, dewater, blend, etc.)
WIDTHS FROM 6" TO 48" LENGTHS FROM 5' TO 250' (With pans 16 ga to ½" plate, of any metal, open or enclosed)
BALANCED, VIBRATION-FREE UNITS AVAILABLE (For use on ceilings or light floor construction)

CARRIER NATURAL-FREQUENCY CONVEYORS

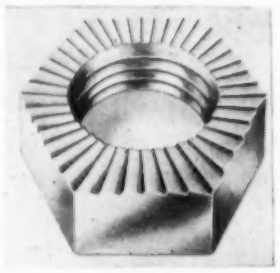
For more details circle **NED-103 J4** on enclosed inquiry slip

COATING THICKNESS TESTER
is magnetic pocket-type instrument

About fountain-pen size, Pocket Handi-Gage will test thicknesses of electrodeposited, hot dipped or painted coatings on steel or other magnetic materials. It will test thicknesses of 0.0001 to 0.15-in., and is accurate to within 10 per cent for coatings thicker than 0.0002-in. When the magnetic end of instrument is applied to the surface under test and slowly withdrawn, a calibrated inner stem appears. The distance the stem travels is a measure of coating thickness. Easy-to-use instrument is furnished in a pocket carrying case with three magnets. Distributed by **Gardner Laboratory, Inc.**, 4724 Elm St., Bethesda 14, Md.

For more details circle **NED-104 J4** on enclosed inquiry slip

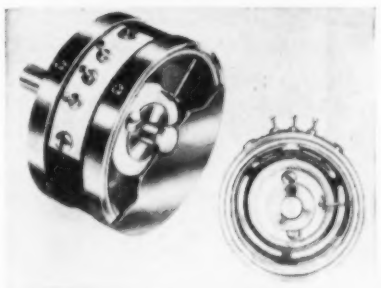
SELF-LOCKING NUTS
reusable, hardened steel fastener



Serrated, hardened teeth on the face of these self-locking nuts provide locking action. All metal construction makes them immune to effects of oil or water. One-piece fasteners are free-running and reusable and are available in all machine screw sizes. Made by **Jacobson Mfg. Co.**, Dept. N, Kenilworth 10, N. J.

For more details circle **NED-105 J4** on enclosed inquiry slip

POTENTIOMETER
operates at over 125° F



Low mass wiper incorporated in type 145 potentiometer permits operation under severe vibration and acceleration conditions. Continuously variable wire-wound unit will operate at ambient temperatures of over 125° F and still maintain rated performance characteristics. Coupling for ganging cups provides zero backlash and low torque, resulting in accurate phasing and ease of cup removal. Nominal function angle is 330 degrees and nominal contact angle is 345 degrees. Resistance range is from 30 to 125,000 ohms. Made by **Daven Co.**, Dept. RB, 191 Central Ave., Newark 4, N. J.

For more details circle **NED-106 J4** on enclosed inquiry slip

Buy the can that's GUARANTEED ...Witt!

WITT CANS are guaranteed to outlast 3 to 5 ordinary Cans. WITT dares to make that guarantee, because WITT CANS are designed to last longer . . . constructed to give years of rugged service. That's why WITT CANS survive severe treatment that soon wrecks ordinary cans. Compare WITT CAN features with those of other Cans on these points:

- *Straight sides*
- *Deep rolling corrugations*
- *Sturdy lid*
- *Heavy gauge steel*
- *Structural steel bands*
- *Hot dip galvanizing*
- *Pinch-proof handles*

You'll see why WITT CANS are guaranteed to outlast 3 to 5 ordinary Cans . . . why, regardless of price, WITT CANS are your best buy!

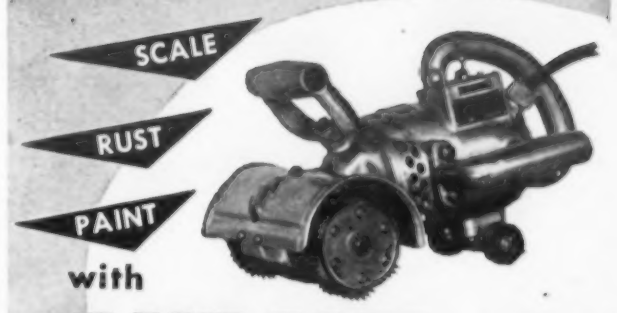
WITT CANS HAVE THE "RIGHT" ANGLE

Witt Cans *"Originators of the Corrugated Can"*

THE WITT CORNICE CO. 2124 WINCHELL ST., CINCINNATI 14, OHIO

For more details circle **NED-107 J4** on enclosed inquiry slip

ZIP OFF



with

AURAND CLEANING TOOLS

ELECTRIC OR PNEUMATIC

AURAND rotary chipping action quickly, easily, thoroughly removes scale, paint, rust, and other accumulation from any hard surface. Renewable cutter heads and fool-proof cutting depth adjustment allow the unskilled operator to produce perfectly clean surfaces. Available in electric or pneumatic models. Write today for further information on cleaning your iron, steel, brick, concrete, and other hard surfaces.

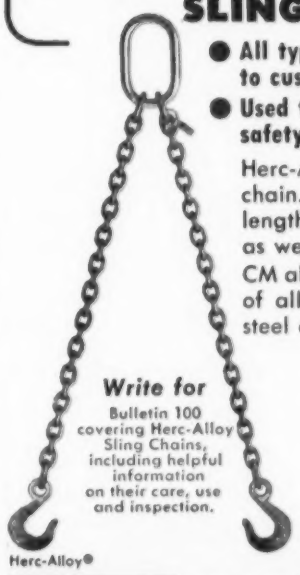
Get the time and money-saving facts

WRITE TODAY TO DEPT. 14

AURAND MFG. & EQUIP. CO.
2643 Colerain Avenue • CINCINNATI, OHIO

For more details circle **NED-108 J4** on enclosed inquiry slip

HERC-ALLOY SLING CHAINS



- All types and sizes assembled to customers' specifications.
- Used throughout industry where safety is paramount.

Herc-Alloy is the original alloy chain. It is available in running lengths and special assemblies as well as slings.

CM also produces welded chain of all types including stainless steel and bronze.

Write for Bulletin 100 covering Herc-Alloy Sling Chains, including helpful information on their care, use and inspection.

Herc-Alloy®

CM HOISTS AND CHAIN

COLUMBUS McKINNON CHAIN CORPORATION
TONAWANDA, NEW YORK
District Offices: NEW YORK • CHICAGO • CLEVELAND
In Canada: McKINNON COLUMBUS CHAIN LIMITED, ST. CATHARINES, ONTARIO

For more details circle **NED-109 J4** on enclosed inquiry slip

in process cooling, in air-conditioning

★ *fit the exact requirements of the job*
★ *reduce installation and operating costs*

If you require cooling for plating, machining, or processing operations, or for air conditioning a plant or offices, Acme Flow-Therm Chillers are worth investigating. Flow-Therm components, *individually selected for the exact capacity* required, are combined in a "package" that is pre-piped, tested, and ready to operate with your choice of compressor.

Flow-Therm — The proven commercial and industrial heat pump for supplying chilled or hot water.

Tailored Flow-Therm capacity gives you economy of operation and maintenance. Packaged units mean low installation cost, compact size, and balanced, efficient performance.

Let Acme engineers solve your temperature problems.

ACME AIR CONDITIONING REFRIGERATION

ACME INDUSTRIES, INC.
JACKSON, MICHIGAN

Continuously serving the Air Conditioning and Refrigeration Industry since 1919

For more details circle **NED-110 J4** on enclosed inquiry slip

SAVE TIME—STEPS—MATERIALS with HANSEN ONE-HAND TACKER

Hansen Model T-4 fastening screens in radio-phono-TV

TAKE HANSEN TACKERS TO THE JOB! Hold materials with one hand. Tack them with the other. Fast operation — flexibility in use — easy portability — are combined in Hansen balanced-design. Self-contained for instant use.

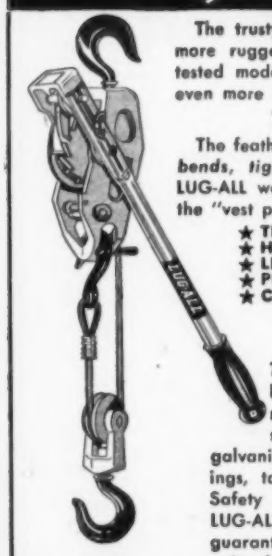
Screens in radio-phono-TV — rubber dies to printer-slotter — plywood — insulation — metal lath — door and window screens — a few of thousands of every-day Hansen-tacked jobs.

A. L. HANSEN MFG. CO. REQUEST BOOKLET

5144 RAVENSWOOD AVENUE, CHICAGO 40, ILL.

▲ For more details circle NED-111 J4 on enclosed inquiry slip ▲

MORE RUGGED NEW LUG-ALL WINCH HOIST



The trusty, husky LUG-ALL Winch Hoist is now more rugged than ever. Newly designed, job-tested models enable the LUG-ALL to meet new, even more challenging requirements.

1½ TON CAPACITY

The feather weight LUG-ALL *lifts, lowers, pulls, bends, tightens or stretches up to 1½ tons!* LUG-ALL works easily around corners. It is *truly* the "vest pocket" hoist of 1,001 uses, such as:

- ★ TIGHTENING CONVEYOR BELTS
- ★ HOISTING MOTORS, SHAFTS, GEARS
- ★ LIFTING VALVES INTO POSITION
- ★ PULLING CABLE THRU CONDUIT
- ★ CONNECTING SLIP-JOINT PIPE

WEIGHS ONLY 9 LBS.

Not a "warmed-over" design, but *THE* really new portable winch-hoist. Newly designed aluminum alloy frame really protects ratchet teeth from rough surfaces. Has 133 strand, pre-formed galvanized aircraft cable. Oiled-for-life bearings, too. Stainless steel springs. LUG-ALL Safety Handle prevents overload. Your LUG-ALL is factory tested before shipment . . . guaranteed for one year. Order today, or write for detailed literature.

Also available in rust-resistant, corrosion-resistant MARINE type models with stainless steel aircraft cable at slight additional cost—all parts salt spray tested.

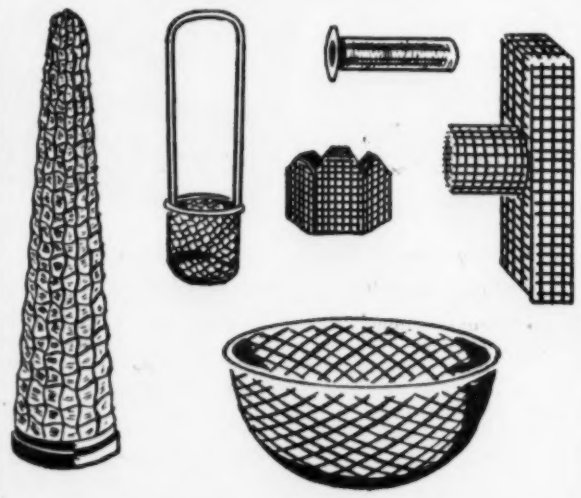
Model 3000 HD $35.25 f.e.b.

THE LUG-ALL COMPANY
WYNNEWOOD 6, PENNA.

▲ For more details circle NED-112 J4 on enclosed inquiry slip ▲

WIRE-MESH PRODUCTS

for all filtering and straining applications. All meshes, all weaves, all alloys.



Send Specifications for an estimate. Department 11.

THE C. O. JELLIFF MANUFACTURING CORP. SOUTHPORT, CONN.

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COMPACT LUBRICATING SYSTEM for small machine elements

Consisting of reservoir, filter, pump and metering units, L Special automatic miniature lubrication system is designed for small machine elements. It measures 2¼-in. high, 1⅜-in. deep and 1½-in. wide. Reservoir holds 20 cc and pump can be adjusted to discharge a total of 0.6, 0.45 or 0.3-cc each time plunger is pulled. Lubricator can be installed to discharge into passages drilled into the machine and proportion lubrication into various passages in varying amounts, or it can discharge into tubing leading to these points. Up to four metering units can be installed inside one lubricator. Metering units can be installed either in a tubing junction or at lubrication points. Lubricator has a ⅝-in. sight window to indicate reservoir oil level. Made by **Bijur Lubricating Co.**, Dept. N, 151 W. Passaic St., Rochelle Park, N. J.

▲ For more details circle NED-114 J4 on enclosed inquiry slip ▲

HYDRO-STEAM CLEANER delivers 1100 lb steam per hour, or 1200 gph hot water at 240 psi

Automatic 40-hp steam generator in the portable Vapor-Clarkson Hydro Steam cleaner develops 120-psi working steam pressure in 2 minutes from cold

water. Over 1100 lb of steam per hour is directed through a Sellers injector where the steam heats the water and pressure is increased. The model 4989-G unit delivers 1200 gph of hot water at 240 psi pressure. It is mounted on a two-wheel trailer.

High pressure steam hoses, cleaning gun and automatic controls which cause machine to make steam only when cleaning gun is on are included. Feed water pump, blower, fuel pump and magneto are driven by 4.5 hp gasoline engine or 2 hp electric motor. Steam pressure is adjustable from 75 to 290 psi. Three forms of cleaning can be performed: 180-degree hot water under 240-psi pressure; hot water under pressure with detergent; and steam cleaning with or without detergents. Made by **Vapor Heating Corp.**, Dept. PR 124, 6420 W. Howard St., Chicago 31, Ill.

▲ For more details circle NED-115 J4 on enclosed inquiry slip ▲

Cut ANY Shape in Metal... with a BEVERLY THROATLESS SHEAR!

- Capacities to 3/16" in mild steel
- Make clean, knurl-free cuts in any metal to capacity
- High Carbon High-Chrome Blades
- Built to last a lifetime

Here's What a Beverly Can Do!

Cuts made in 18 ga. metal with Model B-1

Beverly Shears are the most versatile metal shearing tools you can use. Unique shoulder design permits any cut . . . rack and pinion gives great power with little effort. Alloy steel body for maximum rigidity and strength. Made in 4 models.

Model B-3 with Ball Bearing Hold Down

Write for illustrated circular —or see your Beverly Distributor.

Beverly SHEAR MFG. CO.
3016 W. 111th Street Chicago 43, Ill.

▲ For more details circle NED-116 J4 on enclosed inquiry slip ▲

Need Fabricated Tubular Parts **FASTER? CHEAPER?**

Try Bishop Fabricated Stainless Steel Tubular Parts

Buying fabricated parts direct from the redraw mill saves time and money because "under one roof" fabrication eliminates extra handling costs, reduces transportation charges and speeds deliveries.

J. Bishop & Co. is the only redraw mill that specializes in fabricating tubing. Their 112 years experience fabricating precious metals, and over 20 years drawing and fabricating stainless steel tubing, assure you precision fabrication and quality craftsmanship.

Whether you require stainless steel tubing or fabricated tubular parts, specify Bishop for quality, economy and speed. Catalog on request.

J. BISHOP & CO. • PLATINUM WORKS
STAINLESS STEEL PRODUCTS DIVISION, MALVERN, PA.

▲ For more details circle NED-117 J4 on enclosed inquiry slip ▲

IN service today are electrically heated Sta-Warm tanks of 100, 200, 400 gals. or more capacity and they are operating with complete satisfaction to their users.

The "STA-WARM METHOD" of designing and building compound melters is so simple, so flexible and so adaptable to any *practical* capacity that each new and larger installation is just another readily solvable problem. So . . . the "world's largest" model might be many years off.

You may not need the world's largest compound melter . . . but what ever size you do need is either:

a) a standard Sta-Warm model, or
b) a special designing job in which Sta-Warm engineers will tailor the tank to your special requirements.

There is no more efficient way to melt compounds or to convey and dispense them at the point of application *than the Sta-Warm way.*

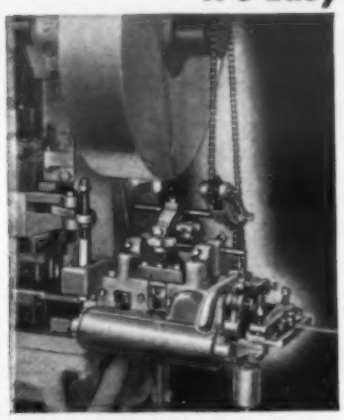
Inquire today, outlining your current needs.

Sta-Warm ELECTRIC CO.
130 N. CHESTNUT ST., RAVENNA, OHIO

▲ For more details circle NED-118 J4 on enclosed inquiry slip ▲

Get RAPID-FIRE PRODUCTION from your PUNCH PRESSES

It's Easy with WITTEK Automatic Roll Feeds



Wittek automatic roll feeds fit all makes and sizes of punch presses — provide maximum efficiency and extreme accuracy in the high speed automatic feeding of strip stock. Made in single roll, double roll, and compound types with straighteners, in models to feed (push or pull) in any direction. Length of feed is easily adjusted to meet individual requirements.

4472

WITTEK Reel Stands

Simplify Handling of Coiled Stock

Choice of standard models to facilitate handling coiled stock . . . from small, light coils to those weighing up to 800 pounds. Larger reel stands automatically center the coils — provide frictional braking action to prevent overrunning, maintain uniform coil slack.

Write for full particulars

WITTEK Manufacturing Co.

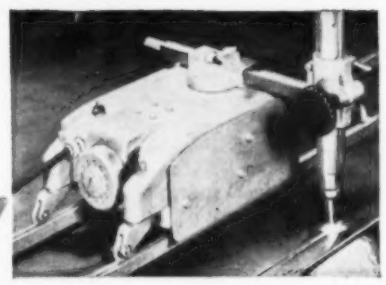
4325 W. 24th Place, Chicago 23, Illinois

Automatic ROLL FEEDS AND REEL STANDS

▲ For more details circle NED-119 J4 on enclosed inquiry slip ▲

SAVE TIME AND MONEY with this

OXWELD Trade-Mark MACHINE CARRIAGE



Here is a new lightweight machine carriage—the OXWELD CM-45—that will mechanize literally dozens of oxy-acetylene jobs in large or small metalworking shops, and do them better than the most skilled hands.

You save money when you let the CM-45 do your cutting, beveling, flame-treating, or special welding jobs. Its efficient operation saves oxygen and acetylene as well as time, and rejects are reduced to a minimum.

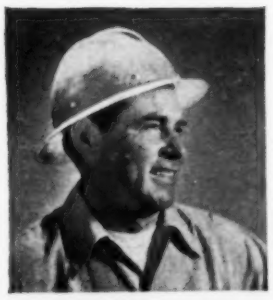
For further information, call your nearest LINDE representative today. Ask for a free copy of Form 7839. No obligation.

LINDE AIR PRODUCTS COMPANY
A Division of Union Carbide and Carbon Corporation
30 E. 42nd St., New York 17, N.Y. Offices in Other Principal Cities
In Canada: Dominion Oxygen Company, Limited, Toronto

"Oxweld" is a trade-mark of Union Carbide and Carbon Corporation

▲ For more details circle NED-120 J4 on enclosed inquiry slip ▲

"Hardboiled" SAFETY HATS



Surest Head Protection!

"Hardboiled" Safety Hats and Caps are lightweight, comfortable, easy to wear—yet they provide the greatest possible protection. High in dielectric strength. Made in metal, fiberglass and plastic, with or without lamp brackets. Available in wide range of colors. One size easily adjustable to all head sizes.

Contact Our Nearest Branch for Details and Prices.

GOODALL RUBBER COMPANY

GENERAL OFFICES, MILLS and EXPORT DIVISION, TRENTON, N. J.

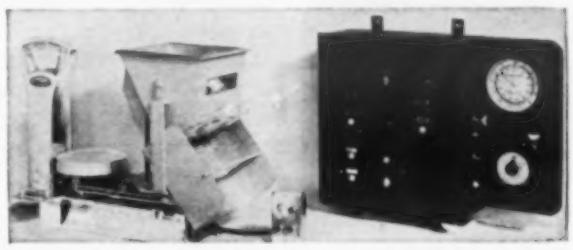
Branches: Philadelphia • New York • Boston • Pittsburgh • Indianapolis • Chicago • Detroit • St. Paul • Los Angeles • San Francisco • Seattle • Spokane • Portland • Salt Lake City • Denver • Houston • Goodall Rubber Company of Canada, Ltd., Toronto • Distributors in Other Principal Cities

Est. 1870

▲ For more details circle NED-121 J4 on enclosed inquiry slip ▲

AUTOMATIC WEIGHER for free-flowing materials

Vibratory feeder incorporated in this automatic net weighing machine feeds any type of free-flowing material until a predetermined amount is in the weigh

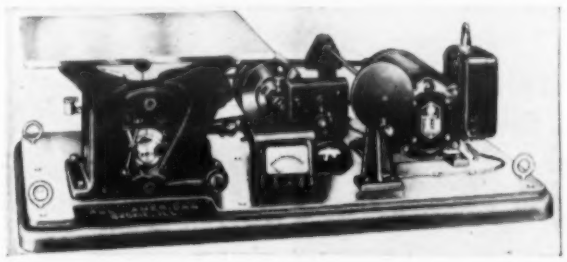


bucket. Contents will not be discharged until a preset time interval has elapsed. A counter unit records the number of weighments and shuts off operation when a preset number of loads has been made. Pushbutton control panel permits manual control when desired. Unit provides visual indication of every weighment. Accuracy is unaffected by any normal machinery vibration. Control rheostats provide infinite adjustment of both fast and slow rate of feed to bucket. Capacity from a few ounces to 25 lb and metric and avoirdupois calibrations are available. Made by **Exact Weight Scale Co.**, 930 W. Fifth Ave., Columbus 8, O.

▲ For more details circle NED-122 J4 on enclosed inquiry slip ▲

VIBRATION FATIGUE TESTERS for heavy parts and components have 10 to 60 cps frequency range

Added to line of vibration fatigue test machines are models 150 HLA-D and 150 VA-D which produce in simple harmonic motion horizontal and vertical vibrations,

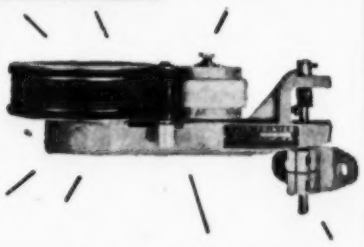


respectively. Both have 150-lb work load capacities and both have a range selector for automatic frequency control. Starting with a 10 cps frequency, acceleration can be increased uniformly to 60 cps, or held at any vibration between 10 and 60 cps. After finding critical range, parts can be held at that range to determine final breakdown point.

Tables of both models are 18 x 21 in. and have 32 tapped holes in symmetrical pattern. Thus, fixtures or part itself can be turned 90 degrees. Ball and roller bearing vibration mechanism runs in oil bath. Both models are designed for continuous operation. Made by **All American Tool Mfg. Co.**, 8013N Lawndale Ave., Skokie, Ill.

▲ For more details circle NED-123 J4 on enclosed inquiry slip ▲

Get marking perfection and SLASH COSTS with the INDUSTRIAL "WHIPPET" MARKER!



Applied to your conveyor line, the "Whippet" offers many unique advantages over other identification methods. The "Whippet" automatically dates, codes, or marks containers, cartons, bags or packages during production runs. It's a non-stop operation that speeds production by eliminating expensive hand stencilling.

Simplicity itself, the printing drum spot prints, turns ½ revolution by friction between "Whippet" and package to positive stop, then repeats the cycle. Self inking, the "Whippet" uses quickly interchangeable rubber type, marks better and faster. You mark containers as you need them.

Let Industrial Engineers prove that high production and precision marking can be yours for less than you might imagine. We welcome the opportunity to solve your marking problems. *Write for Catalog Dept. NED*

Industrial Marking Equipment COMPANY, INC.

454 Baltic Street, Brooklyn 17, New York • MAin 4-2601

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5418

PRECISION GEARS ON RELENTLESS PRODUCTION SCHEDULES

The feature of independent selection of speed, feed and indexing, which speeds machine set-up and provides a means for matching cutting speed and work feed to the material being machined, together with a "reserve of accuracy" built into the machine, has placed the Hamilton Precision Small Gear Hobber high in perference in the precision instrument field.

GET THE FACTS!
WRITE FOR FREE BULLETIN 5418
ADDRESS: THE HAMILTON TOOL COMPANY
901 HANOVER STREET, HAMILTON, OHIO

IT'S A Hamilton Tool
USE IT WITH CONFIDENCE

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"SPOT the Light where you want it... LIGHT the Spot where you need it."

SWIVELIER Adjustable COOLITES

PREVENT BURNS

STAY COOL Using 100-Watt Lamp

LOCKED-IN SPRING-TENSION PREVENTS DROPPING DOWN OR WORKING LOOSE.

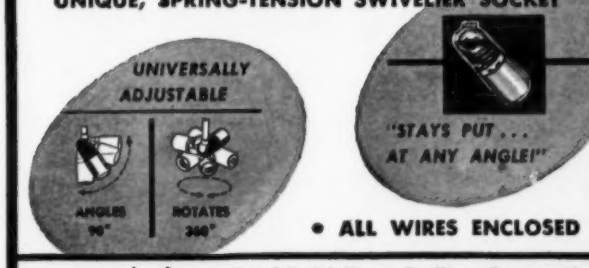
"Never gets too hot to handle"

SWIVELIER FLUORESCENT DEXTRA-LITES

Adjust to any position

For . . . desks, assembly tables, drafting boards, inspection tables, repair benches, etc.

Made with the UNIQUE, SPRING-TENSION SWIVELIER SOCKET



• ALL WIRES ENCLOSED

• For full details on Coolites, fluorescent and incandescent "Dextra-Lites" and other fine Swivelier Industrial Lighting Units Write: Dept. NE-9 for Bulletin 134.

SWIVELIER COMPANY, Inc.
43—34th St., Brooklyn 32, N. Y.
Showroom: 30 Irving Place, New York, N. Y.

TRADEMARK

▲ For more details circle NED-126 J4 on enclosed inquiry slip ▲

YOU ought to pack with the AUTO-PAK! here's why:

You can package your product for protection, for appearance, for ease in handling with the Auto-Pak . . . the low cost versatile, machine that packages such a wide range of products. Eliminates the cost and storage of prefabricated bags and the manual operations of filling and sealing.

Packaging eye droppers

The Auto-Pak automatically forms two sheets of heat sealing material (cellophane, foil, kraft, etc.) around the items to be packaged, seals the four sides, cuts off and delivers a completely sealed, attractive package. The unit delivers as many as one package every second in strips, single or double packs. There are no installation costs with the Auto-Pak. Just plug it in and you're ready to package anything from pills to powder puffs . . . quickly, economically, attractively.

Write for details.

PAK-RAPID INC.
530 N. 21st Street LOcust 7-4840 Philadelphia 30, Pa.
Representatives in Principal Cities

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Look To The Leader For Lubricating Devices

GITS

40 Years' Leadership

Yes, for 40 years GITS has been setting the standard for industry... solving tough lubricating problems...earning the confidence of manufacturers . . . it's the reason people say, "Call GITS first".

Low Cost

Yes, GITS oil cups can do a complete lubricating job for you . . . prolonging bearing life, reducing maintenance costs, cutting down-time, boosting production . . . and GITS oil cups cost so little.

World's Largest Selection

Yes, only GITS can offer you such a wide range of standard stock sizes. From *just one* source you can get *all* lubrication devices in *any design* for *any purpose.*

Consistent Top Quality

Yes, GITS is known for uniform quality in design, materials and machining . . . this means constant, dependable performance for you. Inferior products can cost you time and money. Demand the best . . . get GITS.

Write Today for FREE CATALOG No. 60A Use it as your handy reference for lubricating devices

Oil Hole Covers, Oil Cups, Grease Cups, Bottle Oilers, Gauges, Gravity-Feed, Wick-Feed, Constant Level, Vibrating Rod Styles. Threaded or Drive-Type, Elbow or Straight.

GITS BROS. MFG. CO.
1833 S. Kilbourn Ave. Chicago 23, Ill.

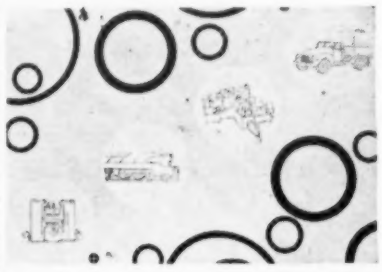
▲ For more details circle **NED-130 J4** on enclosed inquiry slip ▲

AUTOMATIC TIMER for controlling electrical cycles

Automatic timer and cycle sensing device can be used for timed quantity measurements of liquids or solids, for vending machines and for sequential production and other parallel applications. It can be used to control any electrical equipment operating through a cycle. Operation cycle can be set to any specific time requirement from 2 seconds to 2 weeks. Timer is compact and lightweight. Made by **Johnson Fare Box Co.,** 4621 N. Ravenswood Ave., Chicago 40, Ill.

▲ For more details circle **NED-131 J4** on enclosed inquiry slip ▲

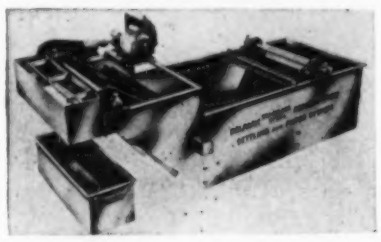
INDUSTRIAL O-RINGS available in sizes from 1/4 to 16 in.



Precision molded from Buna-N fuel and oil-resistant compounds, series of industrial O-rings is designed for both hydraulic and air service. Rings are available in all standard sizes from 1/4 to 16-in. OD. Special sizes can be ordered to meet specifications if desired. Made by **Stillman Rubber Co.,** Dept. D, 5811 Marilyn Ave., Culver City, Calif.

▲ For more details circle **NED-132 J4** on enclosed inquiry slip ▲

SETTLING & FILTER SYSTEM for processing liquid filtration



Particles measuring 0.004-in. or larger are removed from processing liquids by this Delpark settling and filter system, now fabricated of stainless steel. System incorporates a settling basin for removal of particles of varying weights prior to filtration through bar stock screens. Chain driven flights of solid and brush construction pass down the filter screen to remove filter solids, then across the floor of the settling area, gathering additional sediment. Solids are carried up a ramp at the opposite end and fall into a tote box. Screens are easily removed for cleaning. Made by **Industrial Filtration Co.,** Dept. SS-203, Lebanon, Ind.

▲ For more details circle **NED-133 J4** on enclosed inquiry slip ▲

Ten basic sizes with capacities from 30 Mbh to 490 Mbh. Totally enclosed motors.

nyb UNIT HEATERS

Built to Meet Modern Industrial Requirements

Horizontal Type

Ceiling suspension type with heavy duty, welded steel, fin-and-tube heating element. (Extra heavy non-ferrous coils also available.) Suitable for continuous heating service on steam pressures up to 150 pounds or more.

Bulletin 513

Vertical, Projection Type Also Available

For efficient heating from high-ceiling areas—for door heaters over small openings—or where the horizontal type is not applicable. Ten basic sizes; capacities from 27 to 332 Mbh.

Bulletin 516

IUHA HEAT WITH UNIT HEATERS

THE NEW YORK BLOWER COMPANY
SALES OFFICES • 3171 SOUTH SHIELDS AVENUE • CHICAGO 16
FACTORY, LAPORTE, INDIANA

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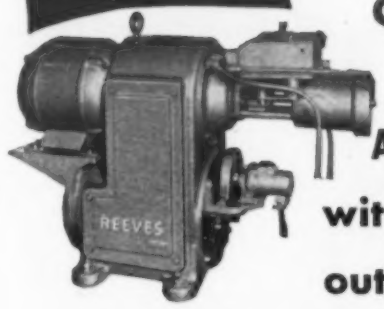
NEW! REEVES Automatic Controls! ...including Auto-Pneumatic with linear output speeds!



● *For automatically controlling liquid levels in tanks, maintaining constant temperatures, pressure, and other variables, and monitoring flow systems of liquids, gases or chemicals.*

REEVES new Auto-Pneumatic control with linear output speeds is but one of a complete line of controls designed and engineered to operate your machines more efficiently, more profitably, *automatically.* Send today for your copy of REEVES new Automatic Production Control Booklet. Specify ND2a-G.

FREE!
Reeves New Automatic Production Control Booklet

REEVES PULLEY COMPANY • COLUMBUS, IND.

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4 WAYS TO CUT COSTS WITH GOOD SCISSORS and SNIPS

You can use with confidence these fine CLAUSS tools. Each meets a specific need in industrial cutting, is made to outlast average cutting tools. Over 100 other models — ask your CLAUSS distributor about them.

1. THREAD CLIP—No. TC4½

USED by Fabric Mills, Garment Makers, and Mfrs. of Electronics Equipment—for snipping loose threads and fine wire.

Hardened and tempered for longer life between sharpenings. Double-plated, chrome over nickel, with special stainless steel screw and lock nut to prevent rust from perspiration.

2. FILAMENT SNIP—No. 76½

USED by Mfrs. of Electronics Equipment and Small Parts Mfrs. —for cutting hard-to-reach filament, light wire, light metal.

Small, sturdy blades for close tolerance, yet with tremendous leverage. Special handles for hand protection.

3. WINDLACE SNIP—No. 928½

USED by Automotive and Aviation industries, for cutting weather stripping, beading, spring wire core, sponge rubber, fabric-covered insulation material.

Sharp, hard blades cut clean without nicking. Long, spring-action handles and short, stubby jaws deliver tremendous power.

4. INDUSTRIAL SNIP—No. 4268

USED by Automotive Industry, Mfrs. of molded rubber items, Poultry Processors, for cutting light metal, upholstery fabrics, in body work, trimming flash from rubber parts.

Long handles and light weight for easy handling and unusual leverage.

Clauss FINE CUTLERY SINCE 1877

CLAUSS CUTLERY COMPANY, Fremont, Ohio
New York Office—1107 Broadway

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"FULFLO" VALVES

BY-PASS, OIL-RELIEF PISTON TYPE, HYDRAULIC

STANDARD OR FLANGE MODELS

NON-CHATTERING

because the cylindrical piston closes off the port in a shearing manner . . . and does not seat abruptly against the body of the valve.

EXTREMELY SIMPLE

Just select pressure desired from 5 springs . . . INSTALL . . . NO FURTHER ATTENTION NEEDED.

For machine tool hydraulic mechanisms, oil-burning equipment, rams, presses and Diesel engines.

Pressures: 0 to 500 lbs.
Pipe sizes: ¼" to 2"
Bodies: cast iron or brass.
Pistons: brass, hardened or stainless steel.

Write on your letterhead for professional edition of FULFLO MECHANICAL DATA BOOK

THE FULFLO SPECIALTIES CO. Inc.
PUMP AND VALVE MANUFACTURERS
BLANCHESTER, OHIO

▲ For more details circle **NED-137 J4** on enclosed inquiry slip ▲

FREE CATALOG!

available to you who are interested in the facts on open steel flooring.

Up to the minute information on the hows and whys of construction and installation of Tri-Lok Open Steel Flooring may now be at your finger-tips. Here is a four-page catalog designed to aid you in selecting the best types and styles of open-steel flooring for your particular construction project.

IN THIS CATALOG YOU'LL FIND
- Tables of Safe Loads
- Specifications required for open steel flooring installation
- Types of Tri-Lok Open Steel Flooring available
- Information concerning construction, sizes, strength and adaptability of Tri-Lok Open Steel Flooring

FOR YOUR COPY, WRITE FOR BULLETIN PW 1102

DRAVO CORPORATION
National Distributor for THE TRI-LOK CO.
Dravo Building, Fifth and Liberty Avenues, Pittsburgh 22, Pa.

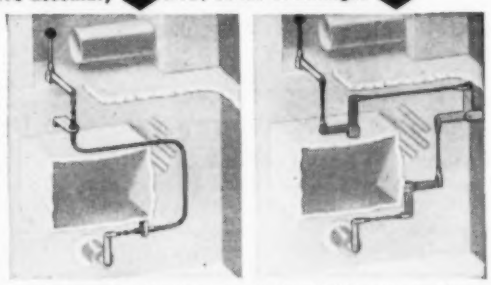
▲ For more details circle **NED-138 J4** on enclosed inquiry slip ▲

IMPROVED OPERATION OF LITERALLY HUNDREDS OF MECHANICAL PRODUCTS HAS BEEN EFFECTED WITH ACCO TRU-LAY FLEXIBLE PUSH-PULL CONTROLS

Tru-Lay Push-Pull Controls provide POSITIVE REMOTE-ACTION over long or short distances . . . with fixed or movable anchorages . . . for light loads or loads up to 1,000 lbs., and these units are frequently and successfully used in conjunction with Electric, Hydraulic and Air Controls.

Flexibility makes it possible to snake around obstructions . . . simplifies installation . . . reduces the number of working parts . . .

to give you this simple and effective assembly ... rather than this complex (and expensive) series of linkages



Positive Remote-Action and Flexibility, together with Precision and Long Life, explain why TRU-LAY PUSH-PULLS serve designers and users equally well in improving machine operations, whether the application is on such severe service jobs as Bulldozers, Power Shovels and Steel Mill Machinery, or on such light duty work as Photographic Equipment, X-Ray or Business Machines.

Immunity to Vibration makes these TRU-LAY PUSH-PULLS ideal as Remote Controls on shakers and other vibratory products.

Complete Protection Against Dirt and Moisture is a big factor in the use of this unit on machinery in Coal Mines, Cement and Steel Mills, Oil Fields and in many other industries.

Corrosion-Resistance of the unit, plated or with Stainless Steel construction as required by the use, has led to many applications in the Marine Field . . . salt water or fresh. Supplied with a rubber cover the unit operates effectively even when conduit is COMPLETELY IMMERSED.

Lubrication of the inner working member is for life.

Temperatures as low as −70° F. will not hinder the proper operation of this unit, and it is throughly effective even in the extreme high temperatures encountered on Jet Engine, Furnace Door and Glass Furnace Damper control applications.

This **IDEA FILE** *will answer most of the questions you may have in mind as to how you might make additional applications of this versatile and dependable tool. Write for a copy, without obligation.*

DATA FILE

ACCO AUTOMOTIVE and AIRCRAFT DIVISION
AMERICAN CHAIN & CABLE
601 Stephenson Bldg., Detroit 2
2216 South Garfield Ave., Los Angeles 22 • Bridgeport 2, Conn.

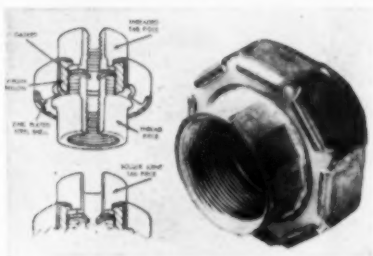
▲ For more details circle **NED-139 J4** on enclosed inquiry slip ▲

PACKAGED ELECTRONIC CIRCUITS installations are easily serviced

Designed to facilitate maintenance of complicated electronic circuits, Sealpak units function as the building blocks from which a major circuit is made up. If a fault occurs, it is only necessary to test relatively few connections according to a predetermined procedure, remove the faulty Sealpak unit and replace it with a new one. Units contain their own electronic circuit and are interconnected in the control panel by attaching leads to screw type terminals. Components are sealed in plastic and enclosed in metal cases to protect against moisture, shock, vibration and corrosion. Made by **Reliance Electric & Engineering Co.**, 1082 Ivanhoe Rd., Cleveland 10, O.

▲ For more details circle **NED-140 J4** on enclosed inquiry slip ▲

DIELECTRIC PIPE UNIONS prevent galvanic corrosion of pipes



Available in a complete size range from ½ to 2 in., dielectric pipe unions afford protection against galvanic corrosion and electrolysis in piping systems where dissimilar metal pipes are connected. They are applicable to systems carrying gas, steam and all types of liquids. Unions have threaded nylon inserts and are available with various types of insulating-pressure gaskets. Reducing type unions are also available. Made by **Universal Controls Corp.**, 731 W. Davis St., Dallas 8, Tex.

▲ For more details circle **NED-141 J4** on enclosed inquiry slip ▲

TORQUE WRENCHES now meet military specifications

Accurate torquing in assembly work is assured with Livermont Hi Lo Torq wrenches which now meet all requirements of Military Specification H-4034-A.

Tools are available with reversible ratchet heads, or with plain square drives and in capacities to meet every practical machine assembly need. Lightweight wrenches have self-contained micrometer adjustment above handle which is easy to set and to read. Made by **Richmont Inc.**, Dept. NED, 922 S. Myrtle Ave., Monrovia, Calif.

▲ For more details circle **NED-142 J4** on enclosed inquiry slip ▲

Mecco SAFETY ROUND SHANK TYPE HOLDER

With the knurled shank designed to permit a firm, positive grip, the Model RS Type Holder is made of Mecco Safety Steel to eliminate mushrooming and spalling. The type is interchangeable, and the holder can be made for either one or two lines of type. Includes patented snap slide for quick changing of type.
Write for literature.

Mecco SAFETY MARKING TOOLS M.E.CUNNINGHAM CO.
1055 CHATEAU STREET, PITTSBURGH 33, PA.

▲ For more details circle **NED-143 J4** on enclosed inquiry slip ▲

THE HAMILTON
PORTELVATOR®
(Portable Elevating Table)

MAKES IT *Easy* TO LIFT • LOWER LEVEL • TRANSPORT LOADS UP TO 5,000 lbs.

3 TABLE SURFACES Can be worked at from **ALL 4 SIDES**

Slow or fast lift.

Self locking at any height.

4 POINT SUPPORT (table can't tip)

Lift mechanism can be operated from either end.

Turns easily on anti-friction casters. Positive floor lock.

WELDED CONSTRUCTION

*THREE STANDARD MODELS TO CHOOSE FROM

FREE BULLETIN
Write The Hamilton Tool Company, 901 Hanover Street, Hamilton, Ohio. Ask for Bulletin No. 5412.

IT'S A *Hamilton Tool* USE IT WITH CONFIDENCE

▲ For more details circle **NED-144 J4** on enclosed inquiry slip ▲

Whatever Your Application...

. . . Sarkes Tarzian Centre-Kooled Selenium Rectifiers give years of trouble-free, maintenance-free service. Write for complete information.

Sarkes Tarzian, Inc., Rectifier Division
DEPT. W-3, 415 N. COLLEGE AVE., BLOOMINGTON, IND.
In Canada: 700 Weston Rd., Toronto 9, Tel. Murray 7535

Sarkes Tarzian "Centre-Kooled" SELENIUM RECTIFIERS

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a new high in... Safety

Dayton Safety Ladders, with exclusive "safety level" working platform, make high jobs "ground safe". Check the "big 6" features that make Dayton your best buy:

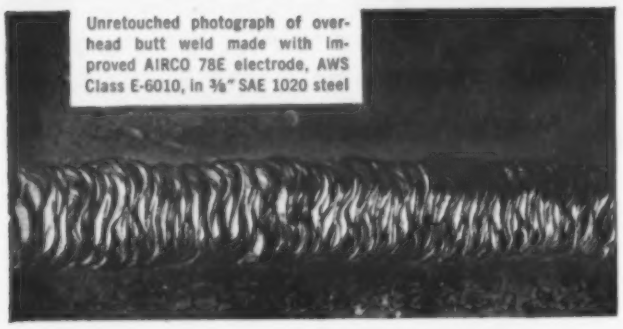
1. Rail-guarded "Safety Level" platform.
2. Locks in place automatically.
3. Rubber safety shoes.
4. Light weight—great strength.
5. Economically priced.
6. Complete size range 3' to 16' in height (to platform).

MAIL TODAY

Dayton Safety Ladder Co., 2339 Gilbert Ave., Cincinnati, O.
Gentlemen: Please send free literature, prices, etc. on your Model A Safety Ladder.
Name_____
Company_____
Address_____
City_____ State_____

Dayton *safety ladder co.*
2339 Gilbert Ave., Cincinnati, Ohio
In Canada—Safety Supply Co.—Toronto

▲ For more details circle **NED-146 J4** on enclosed inquiry slip ▲


Unretouched photograph of overhead butt weld made with improved AIRCO 78E electrode, AWS Class E-6010, in 3/8" SAE 1020 steel

Make mild steel welds like this in any position with the

A smooth-looking weld, yes, but appearance is only part of the story with the improved AIRCO 78E electrode for the all-position DC welding of mild steel. The 78E's improved flux coat gives you higher current capacity and faster burn-off rate . . . without "fingernailing" or slag and gas inclusions in the weld metal. Result: in all positions, weld quality is as good as its smooth outward appearance. Write for your copy of "Pocket Guide to Airco Electrodes."

improved AIRCO® 78E

AIR REDUCTION
60 E. 42nd Street
New York 17, N. Y.

Divisions of Air Reduction Co., Inc.
Air Reduction Sales Co.
Air Reduction Pacific Co.
Represented internationally by Airco Company International

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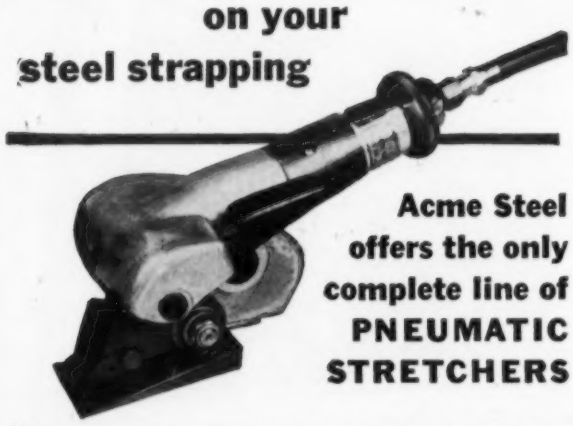
AIM for preset tension on your steel strapping



Acme Steel offers the only complete line of PNEUMATIC STRETCHERS

These new time-saving Acme Steel Strapping Tools can be set in advance for uniform, consistent tension. There's no guesswork. The Pneumatic Stretchers do the work—reducing employee fatigue. There are Acme Steel Pneumatic Stretchers for tensioning strapping on all sizes and shapes of containers, packages and bundles . . . and a model to suit your needs. For details, write Acme Steel Products Division, Dept. JK-94, Acme Steel Company, 2840 Archer Avenue, Chicago 4, Illinois.

AIM *for Safe, Lower-Cost Shipping* — ACME STEEL

▲ For more details circle NED-148 J4 on enclosed inquiry slip ▲

CUT BLUEPRINTING COSTS 50% OR MORE

Save Time—Speed Operations with Whiteprint Automation

NEW 44-inch 115 volt
SPEEDMASTER
Model 1400C Ammonia-Dry
WHITEPRINTER

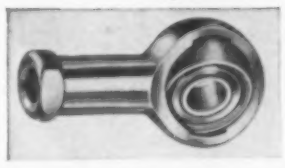
● New design, new features assure maximum efficiency in minimum space. The modern SPEEDMASTER makes it easy for anyone to print and develop exact, same-size black line or colored line whiteprints in volume as needed—continuously or intermittently. *Synchronized* printing and developing speed up to 14 ft. per min. Handles cut sheets or roll stock up to 44" wide in any length. P&H electronic drive provides instant speed change, with full stop and reverse control. Fast write-off...simple installation...easy maintenance. Priced at $1395

Other whiteprint outfits from $69.50
Send for Bulletin 54S5

P&H SALES CORP.
REPRESENTING
PECK & HARVEY MFG. CORP.
5638 N. WESTERN AVE. • CHICAGO 45
Since 1937 • Over 15,000 Machines in Use
MFRS. OF WHITEPRINT, BLUEPRINT & PHOTOCOPY EQUIPMENT

▲ For more details circle NED-149 J4 on enclosed inquiry slip ▲

CONNECTING ROD ENDS of spherical ball bearing design



Connecting rod ends made with spherical bearings are fabricated to aircraft quality specifications. Ball bearings are free of friction and rotate in the housing to correct misalignment up to 20 degrees. Bearings are easily removed and replaced for overhaul and are protected from abrasion by double dust shields. Housing stem is internally threaded either right or left hand. Three bolt hole sizes of 3/16, 1/4 and 3/8-in. are available, rod lengths being 1 1/8, 1 17/16 and 2 1/16-in., respectively. Complete sets consisting of ball bearing ends, lock springs and rods of any desired length are also available. Made by **Avalon Machine Products, Inc.**, 2536 E. Imperial Highway, Los Angeles 59, Calif.

▲ For more details circle NED-150 J4 on enclosed inquiry slip ▲

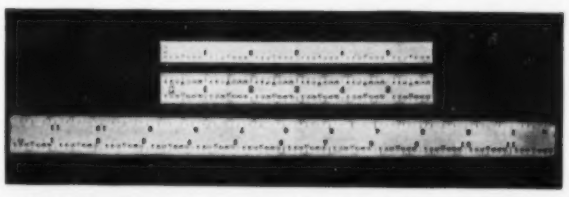
ELECTRIC HOISTS 500 to 4000-lb capacities

Pushbutton control, separate load and motor brakes and foolproof limit switch are features of cable type Quik-Lift electric hoists. They range in capacity from 500 to 4000 lb and offer a choice of lifting speeds and types of suspension. Latch on safety hook is held in place by a lock under spring tension and fits over point of hook so no point or projection can snag on objects it passes. Slight pressure on release unlocks the latch and spring tension holds it open. Made by **Coffing Hoist Co.**, 801 Walter St., Danville, Ill.

▲ For more details circle NED-151 J4 on enclosed inquiry slip ▲

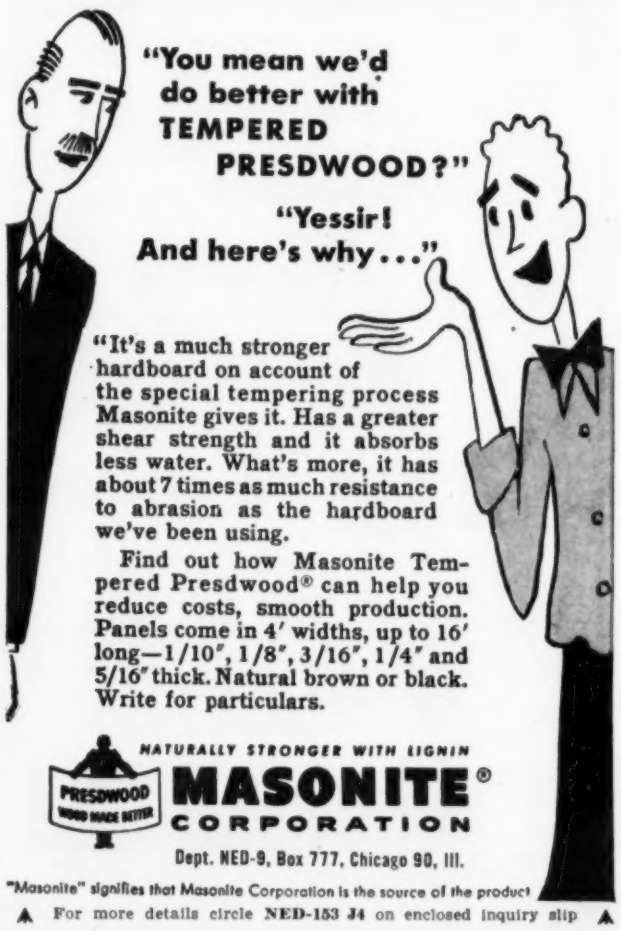
CHROME FINISH STEEL RULES are nonglaring for easy reading

Nonglaring chrome finish on these precision steel rules makes them easy to read in any light, or at any angle, as well as resistant to rust and stain.



No. 312 flexible steel rule, top in photo, is 6 in. long and graduated in 16ths, 32nds and 64ths. No. 316 tempered steel rule, offered in 6 and 12-in. lengths, are middle and bottom in picture. Both are graduated in 8ths, 16ths, 32nds and 64ths. Made by **Brown & Sharpe Mfg. Co.**, Dept. 43, Providence 1, R. I.

▲ For more details circle NED-152 J4 on enclosed inquiry slip ▲



"It's a much stronger hardboard on account of the special tempering process Masonite gives it. Has a greater shear strength and it absorbs less water. What's more, it has about 7 times as much resistance to abrasion as the hardboard we've been using.

Find out how Masonite Tempered Presdwood® can help you reduce costs, smooth production. Panels come in 4' widths, up to 16' long—1/10", 1/8", 3/16", 1/4" and 5/16" thick. Natural brown or black. Write for particulars.

NATURALLY STRONGER WITH LIGNIN
PRESDWOOD WOOD MADE BETTER
MASONITE® CORPORATION
Dept. NED-9, Box 777, Chicago 90, Ill.

"Masonite" signifies that Masonite Corporation is the source of the product

▲ For more details circle NED-153 J4 on enclosed inquiry slip ▲

STOP COMPRESSED AIR LOSSES WITH LUNKENHEIMER AIR DEVICES

Fig. 1571
150 lb.

AIR COCKS

Stainless steel spring in heavy bronze body automatically takes up wear, insuring tightness. Stop lugs cast on body serve as positive open and closed stops. Operates easily, stays tight, and requires no packing.

Fig. 1841 PT
150 lb.

AIR NOZZLES

Correctly designed for positive shutoff—also available with interchangeable flat tip, 10-inch extension tip, and serrated male hose-end.

ASK ABOUT our complete line of Lunkenheimer Air Devices or write for literature.

THE LUNKENHEIMER CO.
CINCINNATI 14, OHIO

LUNKENHEIMER
THE ONE *Great* NAME IN VALVES

L-153-37

▲ For more details circle NED-154 J4 on enclosed inquiry slip ▲

THE NEW NESTIER® ROLLOVER HOPPER*

*Patent Pending

DELIVERS PARTS DIRECTLY FROM SHIPPING CONTAINER

Now . . . small parts can be taken directly to assembly or production areas in original shipping boxes or kegs, where they are made available to workers in convenient hopper form without rehandling into other containers.

In use, a full box or keg, with lid removed, is slid into the bolted down Rollover Hopper. Back panel is lowered and locked in place.

By rotating the unit on its pivot trunnions, parts are literally dumped into the hopper tray, which is designed for easy three-finger withdrawal of contents. Engineered balance allows almost effortless rotation. Easily adjusted sliding "gate" regulates flow.

FOR USE IN ASSEMBLY OR STOCKROOM

Large quantities of high velocity small parts, which have never been rehandled, are thus made conveniently available by the NesTier Rollover Hopper. The original shipping container has been utilized throughout, bringing new economy and efficiency to small parts handling systems.

Write today for Bulletin ROH-201

THE CHAS. WM. DOEPKE MFG. CO., INC.
8884 Blue Ash Road • Rossmoyne, Ohio

NESTIER®

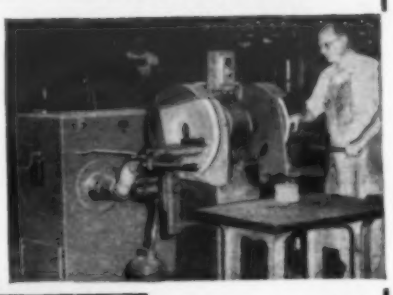
C-183-DH

▲ For more details circle NED-155 J4 on enclosed inquiry slip ▲

STOP DUST INSTANTLY WITH DUSTKOP

300 cfm to 10,000 cfm standard pre-tested units available in stock

- LOW COST
- IMMEDIATE INSTALLATION
- SAVES HEAT
- PORTABLE



2405 ◀ cfm 1400▲ cfm

DUSTKOP

WRITE FOR

- RECOMMENDATION about your dust problem. No obligation
- CATALOG 605-2

AGET-DETROIT CO.

202 S. Main St. Ann Arbor, Mich.

▲ For more details circle NED-156 J4 on enclosed inquiry slip ▲

PACKING from CONVEYOR ...to CONVEYOR SAVES HANDLING

Stock arrives on bench-high line. Empty trays return on center line. Filled cartons move to banding, weighing and shipping without leaving conveyor.

METZGAR EQUIPMENT—PLUS METZGAR EXPERIENCE

- GRAVITY-WHEEL, ROLLER
- LIVE ROLLER
- POWER BELT—HORIZONTAL
- FLOOR-TO-FLOOR
- NYLO ROLL
- SWITCHES, CURVES

. . . gives you highest conveyor efficiency and steps up production tempo. Ask for suggestions. No obligation.

METZGAR CONVEYOR CO.

416 Douglas N. W.

MFRS. OF WHEEL & ROLLER GRAVITY & LIVE ROLLER CONVEYORS • POWER BELT CONVEYORS • SWITCHES • ACCESSORIES & REEL DOLLIES

GRAND RAPIDS 4, MICH.

▲ For more details circle NED-157 J4 on enclosed inquiry slip ▲

It's practically WATER-WHITE a NEW chemically resistant baking finish—

DURACHEM

For all types of metal products from heavy hardware to fine jewelry

A new baking type synthetic finish—DURACHEM—combines unusual clarity with a high degree of chemical resistance. Almost water-white—remains clear after exposure to heat and sunlight—resists salt spray and perspiration. Available in colors too.

Samples and technical literature on request

OUR 78th YEAR PIONEERS M&W.C° 1876 IN PROTECTION

MAAS & WALDSTEIN CO. 2116 McCARTER HIGHWAY NEWARK 4, NEW JERSEY

Midwest Div., 1658 Cornell Ave., Chicago 12, Ill.

Pacific Coast Div., Smith-Davis Co., 10751 Venice Blvd., Los Angeles 34, Calif.

MANUFACTURERS OF INDUSTRIAL FINISHES

▲ For more details circle NED-158 J4 on enclosed inquiry slip ▲

PORTABLE WINCH-HOIST

9-lb unit has 1½-ton capacity

Redesigned Lug-All winch hoist has stronger main frame which protects the ratchet teeth from rough surfaces. This facilitates use alongside steel wire or walls. Winch, which is suitable for such jobs as tightening conveyor belts, pulling cable through conduit, connecting slip-joint pipe and general hoisting, weighs only 9 lb and has a 1½-ton capacity. It is fully portable. Reversible safety handle bends if extreme overloads are applied. Loads can be easily backed off with the interlocking pawl arrangement. Winch has stainless steel springs, oiled-for-life bearings and a 133-strand flexible preformed aircraft cable that winds on the drum out of operator's way. Made by **Lug-All Co.**, 331 E. Lancaster Ave., Wynnewood 6, Pa.

▲ For more details circle NED-159 J4 on enclosed inquiry slip ▲

FLEXIBLE PLASTIC MOLDS

for making small, close tolerance parts of low temperature resin

Technique for reproducing intricate machine parts and potting electronic components uses flexible molds made of vinyl resin base plastisols. Gears, cams and

similar small machine parts, cast of low temperature curing Bakelite C-8 epoxy resins, are light in weight, yet have high shear strength and good dimensional stability.

Embedded electronic and electrical components make use of shock resistance and high chemical and moisture resistance of the resins. About five castings or potted assemblies can be made from a single flexible mold, although simple forms may have higher runs. Mold is made by pouring fluid vinyl resin base plastisol around the object to be reproduced, then curing at 350° F for 15 to 20 minutes.

Pattern is popped out of mold and cavity is filled with cold-setting epoxy resin, formulated with Houghton Hysol 6020 and hardener. It sets at room temperature in up to 3 hours and is popped out without mold release agent. Mold tolerances can be kept to within ±0.005-in. Process developed by **Houghton Laboratories, Inc.**, Dept. J-100, 333 Bush St., Olean, N. Y.

▲ For more details circle NED-160 J4 on enclosed inquiry slip ▲

PAGE FENCE—Since 1883

• AMERICA'S FIRST WIRE FENCE •

• Page Chain Link Fence, pioneered by Page and made only by Page, is quality controlled from raw metal to erected fence. Whether you choose heavily-galvanized Copper Bearing Steel, or long-lasting Stainless Steel, or corrosion-resisting Aluminum, you'll have a rugged fence on sturdy metal posts deep-set in concrete. Choose any one of 8 basic styles, varied by heights, types of gates, posts, top rails and barbed wire strands for extra protection. And to be sure of reliable workmanship your fence will be expertly erected by a specially trained firm. For helpful Page data and name of member nearest you—

Write to PAGE FENCE ASSOCIATION in Monessen, Pa., Atlanta, Bridgeport, Chicago, Denver, Detroit, Los Angeles, Philadelphia, New York or San Francisco.

PRODUCT OF PAGE STEEL & WIRE DIVISION OF AMERICAN CHAIN & CABLE COMPANY, INC.

▲ For more details circle NED-161 J4 on enclosed inquiry slip ▲

REMEMBER . . . THE WORD Varimatic® 5413

It's America's most outstanding super sensitive, small hole, precision drilling machine. And the difference in price between the Varimatic and the cheapest small hole drilling machine is reckoned in pennies per day. Consider that fact when you specify.

For prices and complete specifications

ASK FOR FREE BULLETIN 5413

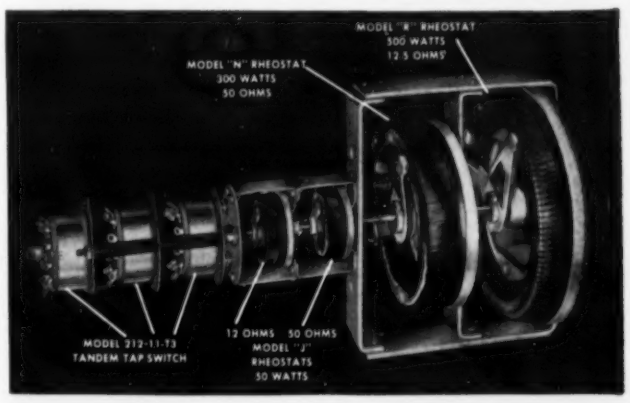
ADDRESS: THE HAMILTON TOOL COMPANY 901 HANOVER STREET HAMILTON, OHIO

IT'S A Hamilton Tool USE IT WITH CONFIDENCE

▲ For more details circle NED-162 J4 on enclosed inquiry slip ▲

OHMITE® RHEOSTATS IN Special Tandem Assemblies

MADE TO ORDER TO SOLVE YOUR UNUSUAL CONTROL PROBLEMS



The above device was specially developed by Ohmite engineers to solve an unusual control problem—how to test and demonstrate various methods of A-C motor speed regulation *with one-knob control.* The result was a special combination of four standard Ohmite rheostats and three standard Ohmite 11-position switches, all coupled together in tandem, and operated by one knob. Any or all units can be connected in the test circuit or wired in any desired fashion. This is only one of innumerable combinations of rheostats, resistors, and tap switches that Ohmite can engineer for special jobs. Why don't you consult Ohmite about your own special control problems.

Write on Company Letterhead for Catalog and Engineering Manual No. 40

OHMITE MANUFACTURING CO.
3620 Howard St., Skokie, Ill.
(Suburb of Chicago)

Be Right with OHMITE

RHEOSTATS • RESISTORS • TAP SWITCHES

▲ For more details circle NED-163 J4 on enclosed inquiry slip ▲

LIFTS DIRT... HOLDS IT OFF...

CINDET

100% ACTIVE 100% SAFE!

NEW LIQUID SYNTHETIC DETERGENT

CINDET can be used *in hard or soft water* for hundreds of cleaning needs. It LOOSENS dirt quickly, LIFTING IT AWAY AND HOLDING IT IN SUSPENSION in a mass of creamy suds. Removes stubborn stains, rubber marks.

CINDET works fast, dries quickly, can be used safely on *anything water itself won't harm*—including the user's skin. Use CINDET to strip old water emulsion waxes from floors quickly and surely, AND FOR ALL GENERAL CLEANING PURPOSES.

CINDET is approved by the Rubber Manufacturers' Division of the Rubber Manufacturers' Association.

Write for Dolge literature on CINDET, and have your DOLGE SERVICE MAN demonstrate its easy, economical use.

FOR FREE SANITARY SURVEY OF YOUR PREMISES SEE YOUR DOLGE SERVICE MAN

dependable DOLGE

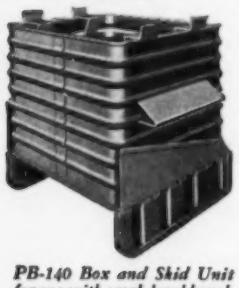
WESTPORT, CONNECTICUT

▲ For more details circle NED-164 J4 on enclosed inquiry slip ▲

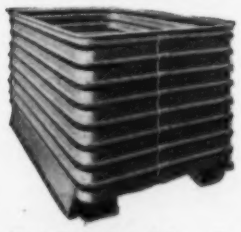
REPUBLIC STEEL BOX AND SKID UNITS

FOR ROLL-OVER AND DUMPING

PB-125 Dump Type Box and Skid Unit



PB-140 Box and Skid Unit for use with work level bench



B-90 Box adapted for roll-over and tiering

Illustrated above is a PB-125 Dump Type Box and Skid Unit. The box dumps instantaneously and automatically. Top rings on the box engage over truck hooks as truck bed is elevated. When truck bed is lowered, the box is automatically unloaded. This unit can be equipped with lugs for tiering.

Republic Box and Skid Units for roll-over and dumping are designed for real efficiency and economy. They are built for easy one-man operation. Use them to handle light or heavy material—wet or dry—hot or cold.

These units are manufactured in a wide range of sizes to meet your individual requirements. Republic Boxes and Skids are fabricated from heavy gage steel sheets with deep reinforcing ribs for maximum strength and rigidity.

Republic Materials Handling Engineers will be happy to work with you in designing boxes and skids to meet your specific requirements. There is no cost or obligation for their service.

For more information on the complete line of Republic Materials Handling Equipment, write for our new Catalog No. 620.

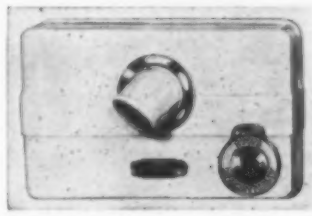
REPUBLIC STEEL CORPORATION
Pressed Steel Division
6206 Truscon Avenue, Cleveland 27, Ohio
GENERAL OFFICES • CLEVELAND 1, OHIO
Export Department: Chrysler Building, New York 17, New York

REPUBLIC STEEL

REPUBLIC MATERIALS HANDLING EQUIPMENT

▲ For more details circle NED-165 J4 on enclosed inquiry slip ▲

ELECTRIC HAND DRYER
is improved semirecessed type



An improved heating element and a nozzle which concentrates the air stream from large blower and motor are featured by this modified Sani-Dri electric hand dryer. In case user places his hand on air intake or nozzle, circuit breaker shuts off heating element, automatically making contact again when hand is removed. Simplified timing device shuts dryer off automatically. Unit has cast iron frame and case with porcelain enamel finish. Made by **Chicago Hardware Foundry Co.,** 3501 Commonwealth Ave., North Chicago, Ill.

▲ For more details circle NED-166 J4 on enclosed inquiry slip ▲

SAFETY STEP LADDERS
feature self-leveling hinge

The Bendick self-leveling hinge that provides automatic leg adjustment for unlevel surfaces is now incorporated on Industrial and Mechanics step ladders. Design minimizes rock, twist, sway, walk or crawl. Ladders are available in the standard range of sizes and are constructed of heavy duty selected lumber. Made by **Richbilt Mfg. Co.,** 3276 Spring Grove Ave., Cincinnati, O.

▲ For more details circle NED-167 J4 on enclosed inquiry slip ▲

LIFT TRUCK TRAILER
towed behind highway truck

Moving and storing of loads at any point on a transport truck route can be speeded by carrying a lift truck to the job on a two-wheel trailer behind the truck. Photo shows a 2000-lb capacity Hyster lift truck which was driven onto the trailer over a hinged ramp which serves as a tailgate while traveling. On one job, a palletized load was loaded and unloaded in a total of 2 man-hours, while former method required 15 man-hours. Trailer available from **Utility Trailer Sales Co.,** 155 Bay Shore Blvd., San Francisco, Calif.

▲ For more details circle NED-168 J4 on enclosed inquiry slip ▲

an ACCO product Helicoid Gages

are protected two ways against FLUTTER

Flutter and rapid surges have no effect on the accurate, long-life performance of HELICOID Gages. Tests show they withstand over 75,000,000 cycles at 1200 pulsations per minute without wear.

1. There are no gears to wear out. Only HELICOID Gages give this long lasting gage movement. Cam wiping action keeps contact points clean and smooth.

2. Bourdon tubes won't stretch, leak or crack. Bourdon tubes in HELICOID Gages give maximum torque and minimum stress—withstand millions of pulsations with greatest possible endurance life.

For Pressure, Vacuum or Compound Service
HELICOID Gages are available for all pressure ranges—with white, black or radiant faces—wall, stem, flush or panel mountings for flangeless cases. See your distributor today or write for **Catalog G-2.**

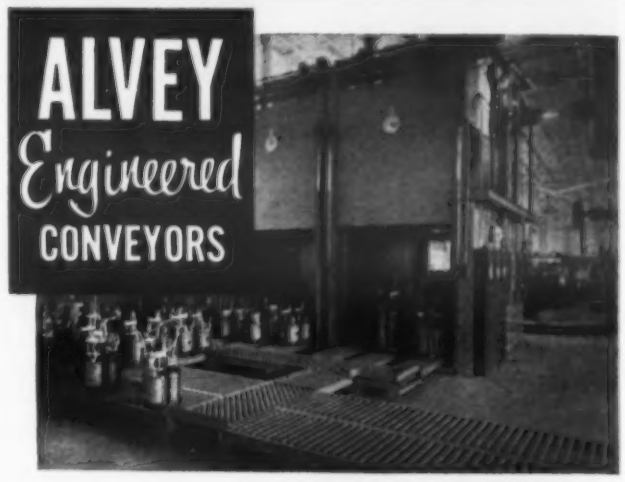
ACCO

Helicoid Gage Division
AMERICAN CHAIN & CABLE
927 Connecticut Ave. • Bridgeport 2, Connecticut

Pressure • Vacuum • Compound

▲ For more details circle NED-169 J4 on enclosed inquiry slip ▲

ALVEY Engineered CONVEYORS



Ease the Handling of Materials in Process

Alvey Conveyors can smooth out and synchronize the flow of materials and parts in manufacturing operations. An Alvey Engineer will be glad to visit your plant to help you determine how you can save time and money and improve production in your plant. Write for additional information.

ALVEY CONVEYOR MFG. CO.
9259 Olive Street Road • St. Louis 24, Missouri
Branch Offices in Principal Cities

ALVEY 125

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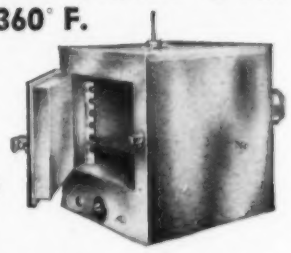
Hotpack INDUSTRIAL
ECONOMY FORCED DRAFT OVEN
Operates 95°F. to 360°F.

SPECIFY Hotpack

HIGH TEMP. BATHS for Tempering Metal Cleaning • ELECTRIC FURNACES • OVENS 12 to 250 cu. ft. • TEST ROOMS • STERILIZERS • STILLS

SAVES SPACE and DRYING TIME



Use it for checking Heat Indicator bulbs for calibration, thermostats, for opening and closing temperature ignition coils and distributor rotors, for breakdown at operating temperature and pistons for thermal coefficient of expansion.

- Interior size 13½" x 11" x 11"
- Hydraulic type thermostat sealed against dirt and moisture
- 2" thick glass wool insulation
- Heavy duty ¼ H.P. direct drive motor
- For operation on 110 V-60-AC 1100 Watts

F.O.B. Phila. $197.50
Send for Complete information

THE ELECTRIC Hotpack COMPANY, Inc.
5063 COTTMAN STREET, PHILADELPHIA 35, PA.

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MAINTENANCE COSTS REDUCED
BOLTED ASSEMBLIES STAY TIGHTER
with RELIANCE SPRING LOCK WASHERS

APPROVED SOURCE FOR AN935 SPECIFICATIONS

SEND TODAY FOR FREE ENGINEERING BULLETIN W-50

EATON

EATON MANUFACTURING CO.
RELIANCE DIVISION
OFFICES and PLANTS • MASSILLON, OHIO
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NEW YORK • CLEVELAND • DETROIT • CHICAGO
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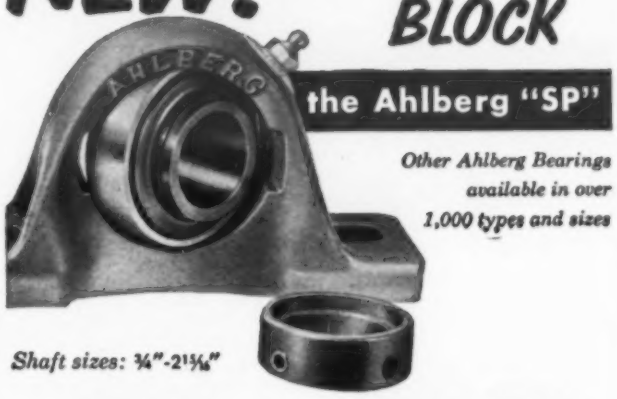
10 key features in a brilliant NEW! PILLOW BLOCK



the Ahlberg "SP"

Other Ahlberg Bearings available in over 1,000 types and sizes

Shaft sizes: ¾"-2 15/16"

- Grease fitting for re-lubricating
- Pre-lubricated bearings
- Generous lubricant reservoir
- Fully self-aligning
- Dirt-proof, leak-proof seal
- Eccentric-type shaft lock
- Maximum size balls for greater capacity
- Equal load distribution for longer life
- Strong, rigid housing
- Elongated bolt holes for easy mounting

AHLBERG

Established 1908

AHLBERG BEARING COMPANY
3029 W. 47th Street, Chicago 32, Illinois

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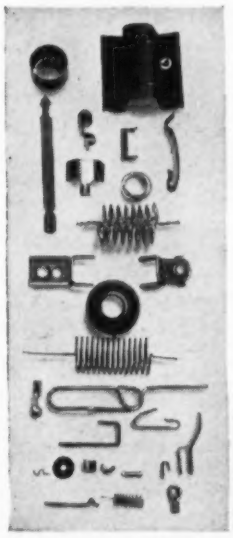
Priced Right! WIRE FORMS & Metal Stampings



High-speed, quality production with custom-made precision. Wire formed to any shape for every need.

WIRE FORMS
.0015 to .125 diameter

STRAIGHTENING & CUTTING
Perfect straight lengths to 12 ft
.0015 to .125 diameter

SMALL METAL STAMPINGS
.0025 to .035 thickness
.062 to 3 inches wide

Specializing in Production of Parts for Electronic, Cathode Ray Tubes and Transistors

Write for illustrated folder. Send Blueprints or Samples for Estimate.

ART WIRE and STAMPING COMPANY
15 BOYDEN PLACE
NEWARK 2, N. J.

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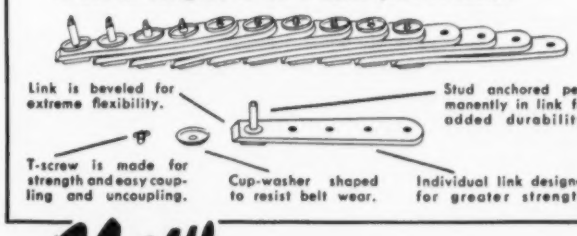
This detailed line drawing of the new, patented Veelos TD and TE v-belt makes it easy to see how this new v-belt is designed to do a better job . . . easier!



New VEELOS

TD and TE Adjustable V-belt for D and E Drives

It installs in minutes. Links are quickly joined by easy-to-use cup-washers and T-screws to make up individual belts.

It lasts for years. New high-tensile strength link combined with new stud, cup-washer, and T-screw gives added durability.

VEELOS IS KNOWN AS VEELINK OUTSIDE THE UNITED STATES.

Get the complete story of this new v-belt for D and E drives. Send now for new 8-page illustrated catalog.

VEELOS THE LINK V-BELT

MANHEIM MANUFACTURING & BELTING CO.
650 Manbel St., Manheim, Pa.

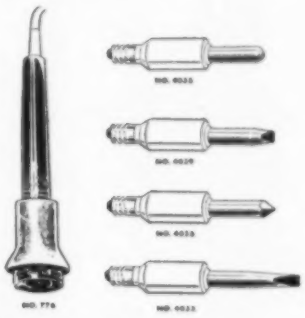
Adjustable to Any Length • Adaptable to Any Drive

2CT

▲ For more details circle **NED-175 J4** on enclosed inquiry slip ▲

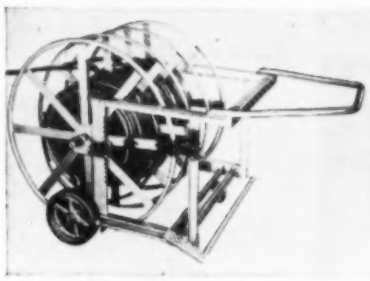
INTERCHANGEABLE SOLDERING TIPS
tip temperatures are 850-1000° F

Lightweight interchangeable Super Hi-Heat soldering tips are designed for the Ungar soldering handle, illustrated at left. Chisel, pyramid, heavy chisel and heating tip styles are available. Tips are designed for heavy-duty production line service. Tip temperatures from 850 to 1000° F are attained with a draw of 47½ w. Iron plated copper composition eleminates need for grinding or other maintenance. Made by **Ungar Electric Tools, Inc.,** 4101A Redwood Ave., Venice, Calif.



▲ For more details circle **NED-176 J4** on enclosed inquiry slip ▲

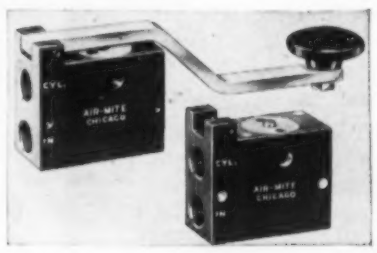
MULTICOMPARTMENT REELS
design speeds cable handling



Designed to provide ease and convenience in handling cable, compartmented reels are used with a Reel-O-Matic unit and permit cable to be measured, coiled and cut to proper length for each compartment of the reel in the warehouse. Complete reel is then shipped to the job ready for immediate use, where one man is able to handle the cable. Reel capacity is 750 MCM. Made by **Reel-O-Matic Corp.,** Columbia 5, Pa.

▲ For more details circle **NED-177 J4** on enclosed inquiry slip ▲

THREE-WAY VALVE
for air cylinder actuation

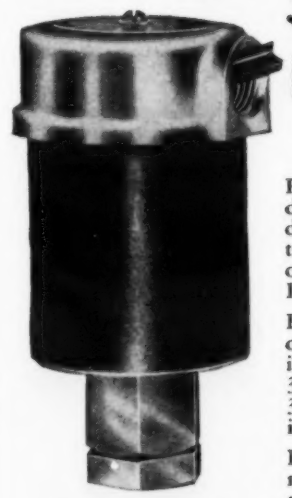


Made with a full ⅜-in. passage, this three-way air control valve is available as a normally-closed model with hand lever (left), or without the lever for machine mounting and cam actuation (right). It operates in any position and instantaneously actuates air cylinders with a ⅛-in. movement. Air connections made to parallel hose nipples at rear keep lines out of the way. Valve is drilled for horizontal or vertical mounting and has brass or aluminum internal components. Dimensions are 2½ x 1¼ x 2⅜ in. without handle. Made by **Air-Mite Devices, Inc.,** 4417N W. Carroll Ave., Chicago 24, Ill.

▲ For more details circle **NED-178 J4** on enclosed inquiry slip ▲

New! Atkomatic SOLENOID Stainless Steel Direct Lift Valve

to 5000 P.S.I.



Write for Bulletin No. 100

Rugged, simple, compact, heavy-duty, two way valve for broad industrial applications. Assures continuous service, nothing to wear out, has only two moving parts. Instantaneous action.

Features higher pressures, greater corrosion resistance. ⅛ and ¼ inch pipe sizes, orifices 1/16 to 3/16 inch diameter. Bodies are 303 Stainless, Solenoid armature is 416 Stainless.

Pressures: 5000 P.S.I. to 150° F. maximum, 2500 P.S.I. to 475° F. maximum. Paper insulated coils up to 180° F., glass insulated, silicone impregnated up to 475° F.

ATKOMATIC VALVE COMPANY
545-B ABBOTT STREET • INDIANAPOLIS 25, INDIANA

▲ For more details circle **NED-179 J4** on enclosed inquiry slip ▲

Free 12-PAGE BOOKLET

helps you choose the Right HOOD Glove for Each Job!

This useful Guide shows the comparative wear and chemical resistance of Hood Neoprene, Rubber and Plastic-Coated Gloves. It illustrates and fully describes the complete line of Hood Industrial Gloves . . . the choice of industry for every job.

Write for your copy today

HOOD RUBBER CO.
A division of the B. F. Goodrich Company
Watertown, Mass.

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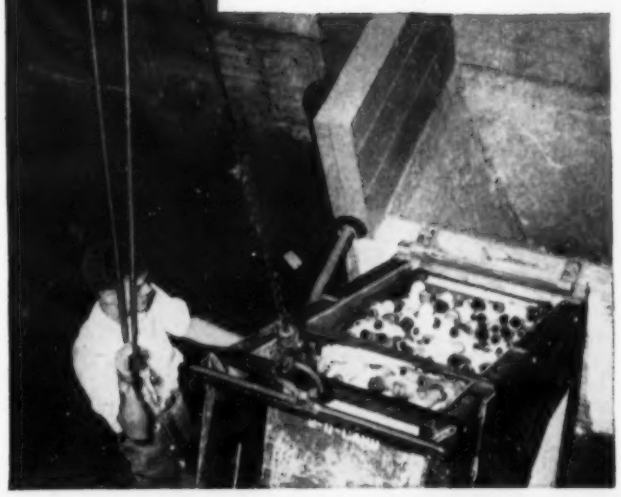
THE YALE MIDGET KING ELECTRIC HOIST

works for less than 2¢ a day



Capacities: ⅛, ¼, ½, and 1 ton. Other YALE Hoists to 40 tons.

Hook or trolley suspension.

Load and motor brakes operate with power on or off.

Upper and lower safety limit stops.

Totally enclosed, heavy-duty motors—AC and DC models.

Quality Control inspection at every stage of manufacture.

• Economy of operation is only one advantage of the YALE Midget King. It's light in weight...low in initial cost ...simple in design, operation and maintenance. It is compact, portable, your best bet for all-around, safe, sure one-hand lifting.

YALE*

INDUSTRIAL LIFT TRUCKS AND HOISTS

*Reg. U. S. Pat. Off.

MAIL THIS COUPON TODAY

The YALE & TOWNE Mfg. Co., Dept. 379
Roosevelt Boulevard, Philadelphia 15, Penna.
Please send me my FREE copy of the YALE Hoist Users and Buyers Guide.

Company_____
Name_____ Title_____
Street_____ City_____ State_____

In Canada write: The Yale & Towne Mfg. Co., St. Catharines, Ontario, Canada.

Gas, Electric, Diesel & LP-Gas Industrial Trucks
Worksavers • Hand Trucks • Hand & Electric Hoists • Pul-Lifts

▲ For more details circle **NED-181 J4** on enclosed inquiry slip ▲

standardize on standard

HALLOWELL®
SOLID STEEL COLLARS

now size-marked for easy identification

42 stock sizes—each marked with shaft diameter for easy identification—are now available at your HALLOWELL distributors'. And these precision machined solid steel collars—in sizes from 3/16" to 3" inclusive—have the famous self-locking UNBRAKO Socket Set Screw to assure positive positioning on the shaft.

Write for literature and the name of your nearest HALLOWELL distributor. STANDARD PRESSED STEEL Co., Jenkintown 24, Pa.

HALLOWELL POWER TRANSMISSION DIVISION SPS JENKINTOWN PENNSYLVANIA

For more details circle NED-182 J4 on enclosed inquiry slip

Added Evidence that— Everyone

Can Count on VEEDER-ROOT

275 laughs in 113 minutes . . . this was the certified count taken at a recent performance of a Broadway show by two executives of Fact Finders Associates, Inc. . . . both using Veeder-Root Hand Tallies.

This is another one of the hundreds of uses for each of the hundreds of Veeder-Root Counters which are made for manual, mechanical and electrical operation. Chances are that *you*, too, can count on Veeder-Root . . . with counters built into your products as standard parts, or attached to your production equipment. We'll help you to figure out how. Write:

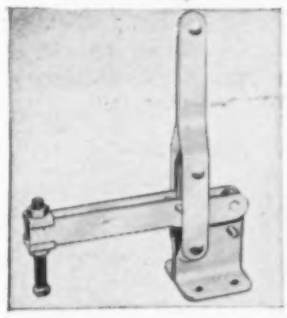
VEEDER-ROOT INCORPORATED
HARTFORD 2, CONNECTICUT

Chicago 6, Ill. • New York 19, N. Y. • Greenville, S. C.
Montreal 2, Canada • Dundee, Scotland
Offices and Agents in Principal Cities

"The Name That Counts"

For more details circle NED-183 J4 on enclosed inquiry slip

TOGGLE CLAMPS & PLIERS
nonmagnetic and corrosionproof



Troublesome magnetic attraction and corrosion that accompany toggle clamp and plier use while spot welding aluminum, or working close to acids is eliminated by model V-400 toggle clamp and model P-1200 pliers. Clamps (shown) are made from nonmagnetic stainless steel and portable toggle pliers (not shown) are forged from nonmagnetic K-Monel. Clamp has channel on which spindle slides for positioning anywhere along its length. Spindle provides adjustment for height and for clamping force which is a recommended 400 lb with spindle located at end of channel. Pliers have clamping force of 1200 lb. Made by **Lapeer Mfg. Co.**, 3058 Davison Rd., Lapeer, Mich.

For more details circle NED-184 J4 on enclosed inquiry slip

SOLID WOVEN BELTING
offered in widths up to 84 in.

Elevator, conveyor and power transmission operations are potential applications for line of solid woven belting, offered in from two to ten-ply thickness and in widths to 84 in. Dandux solid woven belting is available as untreated white cotton belting or impregnated with a waterproof compound to provide a sanitary and waterproof surface. Made by **C. R. Daniels, Inc.**, Dept. N, Daniels, Md.

For more details circle NED-185 J4 on enclosed inquiry slip

ROLLOVER HOPPER
dispenses box or keg contents

Small parts can be taken to assembly or production areas in their original shipping boxes or kegs, then made available to workers in a hopper without rehandling into another container. Full box or keg with lid removed is slid into a bolted-down Nestier rollover hopper through a back panel opening. After retaining lid is secured, unit is rotated on pivot trunnions. Small parts flow into hopper tray for easy withdrawal. Feeding of parts into tray is regulated by an adjustable gate. Once empty, device is rotated back to loading position, empty container is removed and cycle is repeated. Made by **Chas. Wm. Doepke Mfg. Co.**, 8884 Blue Ash Rd., Rossmoyne, O.

For more details circle NED-186 J4 on enclosed inquiry slip

SAVE... TIME MONEY TROUBLE

Rex Sprockets with Taper-Lock Bushings

Here are the sprockets that give you quick, off-the-shelf delivery...are quick to put on or take off the shaft...and that save you money. Just assemble sprocket and bushing and lock them on the shaft. No re-boring, key seating or drilling and tapping for setscrews required. Get all the cost-saving facts. Send for your copy of Bulletin 53—21. Write Chain Belt Company, 4686 West Greenfield Avenue, Milwaukee 1, Wisconsin.

CHAIN BELT COMPANY

For more details circle NED-187 J4 on enclosed inquiry slip

TEMCOMETER
Temperature Controller and Indicator

Combines in a single, compact unit an advanced type of input controller and an indicating pyrometer. Unlike other type controllers, the *TEMCOMETER* automatically maintains even temperature regardless of fluctuations in line voltage. A sensitive panel-operated thermostatic switch can be set to regulate current input into the heating equipment anywhere from 5% to 100% time "on."

Originally designed as a built-in feature of Temco electric furnaces, this complete control unit is now made for use with other makes of furnaces and electric heating devices.

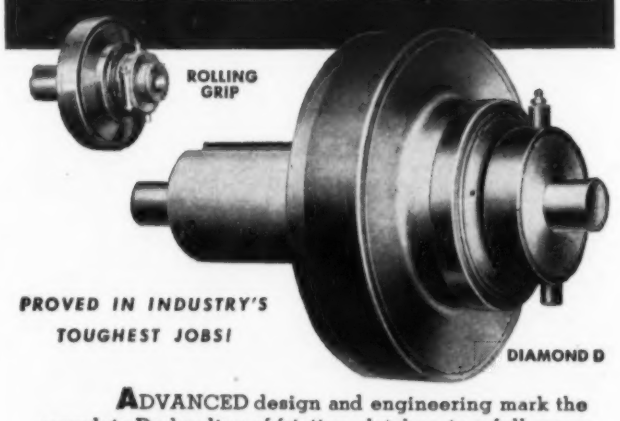
Made both with and without pyrometer for maximum loads ranging from 2.3 to 5.7 kw. Priced from $38.50 to $62.50.

Write for new handy Reference File and dealer's name.

THERMO ELECTRIC MANUFACTURING CO.
484 Huff St., Dubuque, Iowa

For more details circle NED-188 J4 on enclosed inquiry slip

DODGE
FRICTION CLUTCHES



ADVANCED design and engineering mark the complete Dodge line of friction clutches, in a full range of sizes, with capacities from 1/3 hp. to 470 hp. Rolling Grip clutches have no toggles, combine ease of control with positive drive. Diamond D clutches, compact, fully enclosed, have stamina for grueling service. For detailed information write

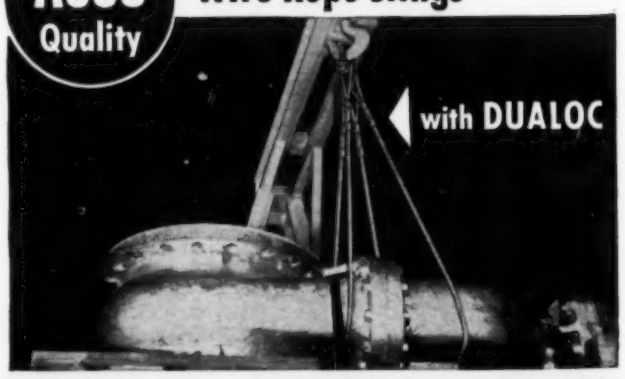
DODGE MANUFACTURING CORPORATION, 2100 Union St., Mishawaka, Ind.

DODGE of Mishawaka, Ind.

For more details circle NED-189 J4 on enclosed inquiry slip

ACCO Quality

ACCO Registered* Wire Rope Slings



Cable-laid DUALOC Slings Lift 4000-lb Valve Safely

• Two 9/32" SW-6 ACCO *Registered* Cable-Laid Slings and one safety shackle in 30° double basket hitch with a 5-to-1 safety factor lift this 4000-lb valve safely. *Compare with what you use.*

Now you can choose from hundreds of types and sizes and lengths of standard slings. All have patented DUALOC endings . . . and ACCO *Registered* links, safety shackles, and hooks. Your ACCO *Registered* distributor stocks many popular sizes. See him today or write our Wilkes-Barre, Pa., office.

*Trade Mark Registered

ACCO Wire Rope Sling Department
AMERICAN CHAIN & CABLE

Wilkes-Barre, Pa., Atlanta, Chicago, Denver, Houston, Los Angeles, New York, Odessa, Tex., Philadelphia, Pittsburgh, Portland, Ore., San Francisco, Bridgeport, Conn.
In Canada: Dominion Chain Co., Ltd., Niagara Falls, Ont.

for Better Values

For more details circle NED-190 J4 on enclosed inquiry slip

This little lug → saves time on-the-job

BAL TOTE BOXES

Don't Jam When Nested

That metal lug on the tapered sides does it—won't permit Tote Boxes to jam no matter how hard they're slammed together. It speeds materials handling!

You get other benefits, too, from Bal's construction: lightweight, hard vulcanized Aerofibre; strong riveting throughout; and rust-protected reinforcements where they're needed. Results? . . . long-time satisfaction.

Write for complete catalog

SINCE 1898 william BAL corporation 11 JOHNSON ST NEWARK 5, N. J.

For more details circle NED-191 J4 on enclosed inquiry slip

SNAP-LOCK TRADE MARK

plays vital part in new plant AUTOMATION PLANS

INGERSOLL says . . .

"for this special model, we again rely on 13 Snap-Lock switches to insure correct sequencing of all 6 operations for automatic milling of tops, bottoms and sides of sole plates for electric flat irons, at 1000 per hour -- fastest rate ever attained."

The Ingersoll Milling Machine Co. at Rockford, Ill., top flight builders of precision automatic milling, boring and drilling machines, have for years standardized on Snap-Lock limit switches.

Snap-Lock is the heavy duty limit switch—quick-acting, positive, dependable—built *by* machine tool builders *for* machine tool builders.

In the 15 years since we first designed Snap-Lock to meet our own machine tool needs, it has been adopted as the standard switch equipment by 4 out of 5 of all builders of precision operated machine tools. Hundreds of users of other types of equipment also specify Snap-Locks—where control is vital, where lasting and service-free life is more important than mere price.

If you have a switch problem, choose from the wide variety of Snap-Lock standard types with regular or special mountings or, if you need a special application, let our engineers help you design Snap-Lock into your product.

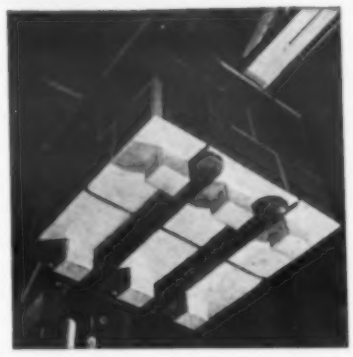
Ask for Engineering Bulletin EM-51

ELECTRICAL MANUFACTURING DIVISION
The NATIONAL ACME COMPANY
170 EAST 131st STREET • CLEVELAND 8, OHIO

ACME-GRIDLEY BAR and CHUCKING AUTOMATICS
1-4-6 and 8 Spindle • Hydraulic Thread Rolling Machines • Automatic Threading Dies and Taps • Limit, Motor Starter and Control Station Switches • Solenoids • Contract Manufacturing

For more details circle NED-192 J4 on enclosed inquiry slip

EXPENDABLE PALLETS
made of corrugated fiber board



Delivered flat in knock-down form, Farrell expendable pallets consist of a deck and appropriate number of posts, depending upon load to be carried. Posts are assembled in a simple folding operation, inserted in slots and fastened to the deck with an ordinary stapling machine. They are made of corrugated board, weigh only 6 lb for the standard 40 x 48-in. size and have a compression strength of 1500 to 2000 lb per post. Construction affords fork truck entrance and strapping from all sides. Post design permits locking pallet to deck. Standard size is 40 x 48 in., but any size can be made. Available from **Louis Van Orden Associates,** Dept. NED-1, 104 E. 40th St., New York 16, N. Y.

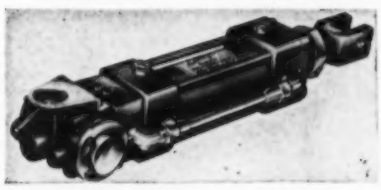
For more details circle NED-193 J4 on enclosed inquiry slip

WAX REMOVER
floats old residues for mop pickup

Allowed to soak on floor for 5 to 10 minutes, Dewax wax remover dissolves built-up residues and floats them for mop or vacuum pickup. Product actually re-emulsifies old wax and contains no alkalies that might soften, discolor or dissolve soft floor materials. It is diluted 1 part to 10 parts of hot water. With floor machine and .00 steel wool pad, Dewax will remove old wax in few minutes. Developed by **Peck's Products Co.,** Dept. S. S., 610 E. Clarence Ave., St. Louis 15, Mo.

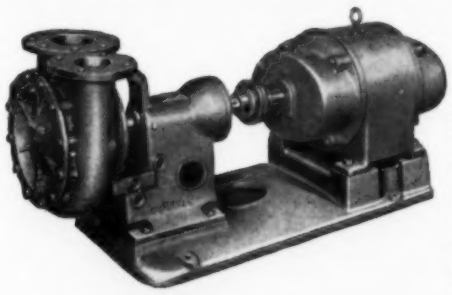
For more details circle NED-194 J4 on enclosed inquiry slip

AIR MOTOR
made in three bores and any stroke



Cylinder, four-way valve and wide variety of valve controls are combined in compact Lehigh air motor which requires only one connection to air source. Built-in valve can be operated manually or by air or electricity, or different means in each direction. Motor is available in bores of 1½, 2 and 3 in. with any desired stroke. Motors can be furnished with or without adjustable cushions at either or both ends of the cylinder. All have adjustable vane speed control in both directions. Nine mountings are available and operation can be on air up to 200 psi. Made by **Lehigh Foundries, Inc.,** Air Control Div., 1503 Lehigh Dr., Easton, Pa.

For more details circle NED-195 J4 on enclosed inquiry slip



The entire fluid end of this chemical pump is available in any of the following metals: 316, Gould-A-Loy 20, 304, all iron, all bronze or bronze fitted, all iron with stainless trim. Nine sizes ranging from ¾" to 3"; capacities up to 720 GPM; heads to 200 ft.

You get a lot for your money
In this new chemical pump

New design features of the Goulds Fig. 3715 centrifugal pump offer you special operating and maintenance advantages in handling acids, alkaline liquors, and slurries.

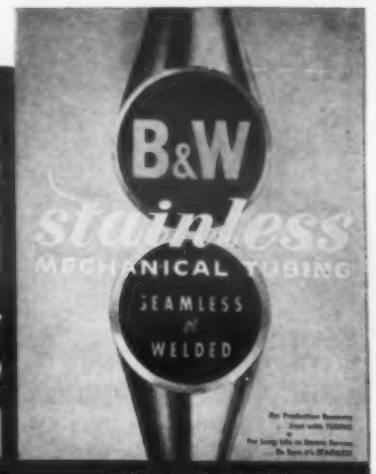
Thousands of severe-service uses have proved the operating efficiency of the liquid end of the Fig. 3715 design, but the support head is completely new. It's a sturdy, box-type design with water cooling which raises the maximum liquid temperature limitation to 350° F. It has grease-lubricated standard bearings with grease relief that helps prevent over-lubrication . . . and a simple, positive external arrangement for adjusting impeller clearance without any dismantling.

Bulletin 725.4 describes *all* the operating and maintenance advantages of the Goulds Fig. 3715 chemical pump. It defines the extensive standardization this design accomplishes for simplifying your parts inventory. It gives you detailed performance curves. We will be glad to send you a copy.

Goulds PUMPS INC. Seneca Falls New York

For more details circle NED-196 J4 on enclosed inquiry slip

stainless mechanical tubing information



on B&W Seamless or Welded Tubing

Send for B&W's new bulletin. It's got plenty of information—analyses, mechanical properties, processing data, finishes, sizes, shapes—backed by plenty of experience.

Ask for it by number—TB 365.

TA-4071 (LM)

THE BABCOCK & WILCOX COMPANY
TUBULAR PRODUCTS DIVISION
Beaver Falls, Pa. — Seamless Tubing; Welded Stainless Steel Tubing
Alliance, Ohio—Welded Carbon Steel Tubing

For more details circle NED-197 J4 on enclosed inquiry slip

Turret is accurately positioned IN ONE SECOND by Star-Kimble Brakemotor

Turret and tools on this Warner & Swasey 2AC Machine weigh 1250 pounds—and a standard 1 hp Star-Kimble Brakemotor accurately positions the turret for the next operation *within 1 second!* RAPID TRAVERSE MOTOR is a completely special Star-Kimble design. FOR THE MAIN DRIVE MOTOR—selected by the customer—many 2AC purchasers are specifying a 15 hp Star-Kimble motor specially modified for the application.

Standard and special motors of all types, 1 to 125 hp; generators and motor-generator sets, 1 to 100 kw; marine motors, ½ to 125 hp.

STAR-KIMBLE
MOTOR DIVISION
Miehle Printing Press and Mfg. Co.
214 Bloomfield Avenue Bloomfield, N. J.

For more details circle NED-198 J4 on enclosed inquiry slip

WE CARRY COMPLETE BAR STOCKS

- cold finished carbon
- hot rolled alloy
- cold finished alloy
- stainless

• All our warehouses carry a wide range of types, sizes and grades of steel bars. And you can always count on consistent high quality with the bars we carry. Why not simplify your buying by ordering *all* your bar stock from a single dependable source . . . U. S. Steel Supply?

WRITE FOR FREE BOOKLETS NOW

U. S. Steel Supply Division,
208 So. La Salle St., Chicago 4, Ill.
Please send me, without obligation, descriptive literature on the following types of bars:
☐ carbon C.F. ☐ alloy H.R. ☐ alloy C.F. ☐ stainless
Name.....
Firm.....
Address.....
City.....State.....

U. S. STEEL SUPPLY DIVISION
General Offices 208 So. La Salle St., Chicago 4, Ill.
Warehouses and Sales Offices Coast to Coast
UNITED STATES STEEL

For more details circle NED-199 J4 on enclosed inquiry slip

Midgets or Giants?

You'll Find Both in PROTO's EXPANDED Line of Torquers

Two NEW plain head "midgets" (¼" and ⅜" drives) and two NEW ¾" drive "giants" bring the total Torquer models offered to 16. "Midgets" are ideal for aircraft parts, instruments, electronic equipment, automatic transmissions, etc., while "giants" are used in heavy industry. Buy the models you need from your PROTO dealer. Send 10¢ for 68-page catalog to

PLUMB TOOL COMPANY
2275U Santa Fe Avenue
Los Angeles 54, Calif.

5490

Why PROTO Torquers Are Superior

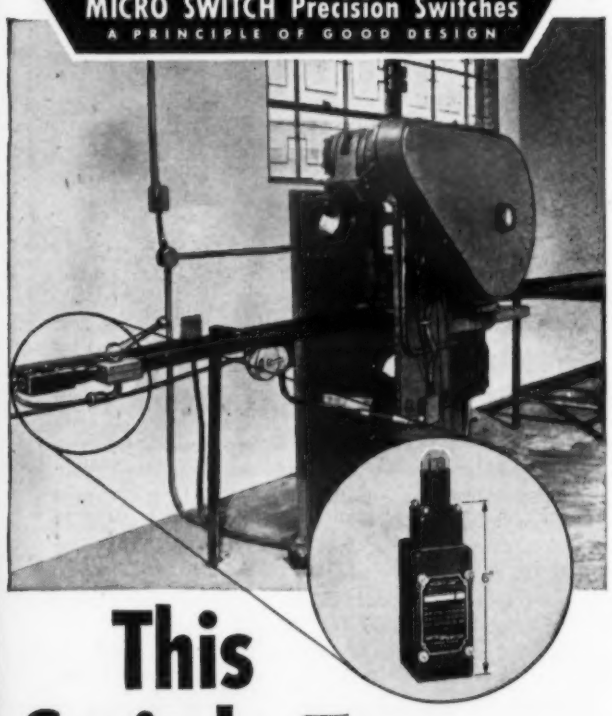
* Fastest torquer in the world
* No dials, pointers, scales or other projecting gadgets
* Automatically releases and resets
* Accurate, micrometer-type adjustment
* Trouble-free construction

PROTO TOOLS

Eastern Factory—Jamestown, N.Y.
Canadian Factory—London, Ont.

For more details circle NED-200 J4 on enclosed inquiry slip

MICRO SWITCH Precision Switches
A PRINCIPLE OF GOOD DESIGN



This Switch CUTS

METAL
MAN HOURS
OPERATING COSTS

● Shown here is a combination roller-leveling and cut-to-length machine on which a MICRO SWITCH heavy duty limit switch is installed.

"This switch not only dispensed with the need of one man, but speeded up the operation of the machine by some ten to fifteen per cent," say the plant operating people.

The switch, which operates the cutter, is set at the proper length, and as the flattened stock strikes the switch, the shear cuts the metal. Only function of the operator is to unload the cut pieces.

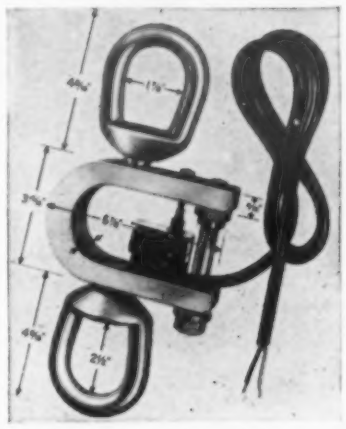
Plant operators, maintenance men, electricians are constantly finding new ways to make present equipment more automatic through the use of MICRO SWITCH precision switches. This makes them safer to operate and increases production.

MICRO SWITCH distributors, with full stocks of the switch types which have proved most useful in plant applications, are located near you. Look in the yellow pages of your phone book under "switches, electric." MICRO SWITCH switches can cut your operating costs, too.

MICRO SWITCH
A DIVISION OF MINNEAPOLIS-HONEYWELL REGULATOR COMPANY
FREEPORT, ILLINOIS

For more details circle NED-201 J4 on enclosed inquiry slip

OVERLOAD DEVICE protects hoisting equipment

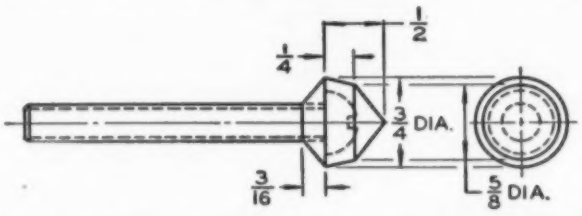


Improved Dyna Switch hoist overload protection device provides increased protection from both excessive overloads and side twist. Placed on or above the hoist hook in series with the load, it automatically breaks the lifting circuit if preset safety maximum is exceeded, though permitting load to be lowered for adjustment. Operating range is from 500 to 10,000 lb with an accuracy of 0.5 per cent. Free-riding stop bolt in improved model makes possible accidental overloads up to 35,000 lb without affecting calibration. Lifting eyes are welded in position to resist turn-out torque set up by heavy twisting loads. Made by **W. C. Dillon & Co.**, Dept. NED, 14620 Keswick St., Van Nuys, Calif.

For more details circle NED-202 J4 on enclosed inquiry slip

CLAMP PRESSURE FOOT is rubber tipped, one-piece type

Rigidity in applying pressure to a work piece is assured by this one-piece pressure foot, consisting of a diamond shaped rubber tip molded on full length



threaded 5/16-in. machine screw. Pressure foot is adaptable to Wespo toggle clamps and can be used for clamping in unrestricted areas, corners and restricted areas on aluminum and other light materials. Pressure applications on polished surfaces are also possible. Made by **West Point Mfg. Co.**, 26943 W. Seven Mile Rd., Detroit 19, Mich.

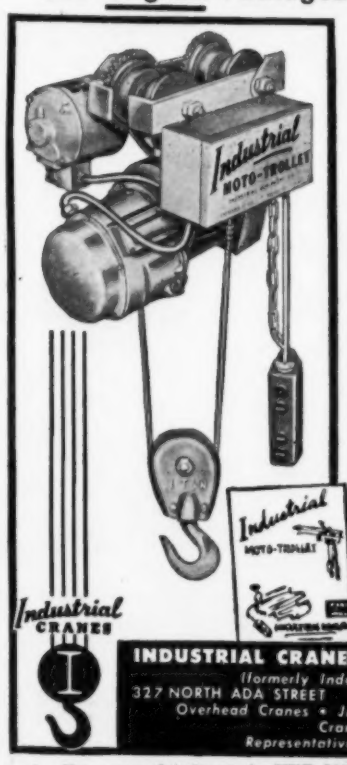
For more details circle NED-203 J4 on enclosed inquiry slip

Fluid & Mastic Pumping Equipment

Stewart-Warner Corp., Alemite Div.—32-page illustrated catalog 35-12 describes Versatal material handling equipment, consisting of pumps, tubing and spray or extruding guns or other point-of-application control valves. Systems will handle a material range from fluids to heavy mastics such as putty or cake icing. Catalog covers packaged systems to spray, extrude, package or transfer various types of materials.

For more details circle NED-204 J4 on enclosed inquiry slip

Industrial MOTO-TROLLEY
The Original Packaged Motor Driven Trolley



MAY BE ATTACHED TO YOUR STANDARD ELECTRIC HOIST . . .

Adjustable to Accommodate Wide Variety of Beam Sizes

● Crown-tread machine steel wheels with hardened drivers.
● Each wheel equipped with double-row precision ball bearings and removable-head axle with Alemite grease fittings.
● Powered by a crane-duty high-torque totally enclosed motor of 30 minute 55 degree rating.
● Magnetic contact panel has transformer to reduce voltage in single speed push button control circuit.
● 4-button control station operates single speed trolley and hoist motions.

Write for Literature.

Industrial CRANES

INDUSTRIAL CRANE & HOIST CORPORATION
(Formerly Industrial Equipment Co.)
327 NORTH ADA STREET CHICAGO 7, ILLINOIS
Overhead Cranes • Jib Cranes • Monorail Systems
Crane Runways
Representatives in Principal Cities

For more details circle NED-205 J4 on enclosed inquiry slip

the BEST TOOL for every cleaning job

an EXCELLENT FIRE PRECAUTION too

HYPRESSURE **Jenny** STEAM CLEANER

New Series "1800" Jenny, ideal for industry's heavy-duty cleaning jobs.

As a general maintenance tool JENNY will save you up to 90% in man-hours and plant cleaning costs by removing oils, grease, muck and grime from machinery, conveyors, floors, walls, skylights, semi-finished products, tools and equipment, *10 times faster—and better* than bucket, brush, and scraper, volatile solvents, or other outmoded cleaning methods. And you'll realize additional savings through the stepped-up production which results when mechanics work with clean tools and equipment.

Add to this the fact that by JENNY steam cleaning you are eliminating the oils, grease, and other inflammables that spark fires and spread them, and you can see why a *JENNY in your plant is one of the best methods of fire precaution you can take.*

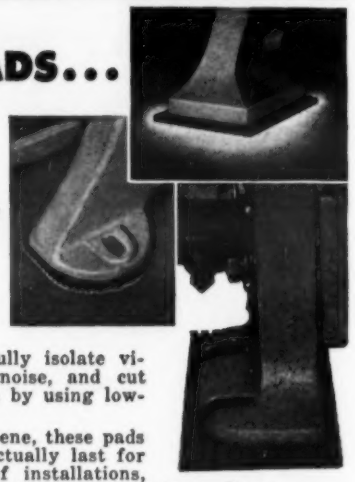
Send for Catalog today for full facts.

HYPRESSURE JENNY DIVISION
HOMESTEAD VALVE MANUFACTURING CO.
Serving Since 1892
P.O. BOX 84 CORAOPOLIS, PA.

For more details circle NED-206 J4 on enclosed inquiry slip

ISOMODE* PADS...

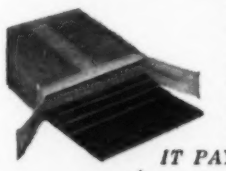
money-saving "shoes" for busy machine feet!



Now you can successfully isolate vibration, muffle plant noise, and cut down maintenance bills by using low-cost Isomode Pads.

Made of DuPont Neoprene, these pads resist oil and water, actually last for years. In thousands of installations, they have already proved their ability to swallow up troublesome machine shock and vibration. Even that of giant punch presses.

Installation is quick, easy. And there's no waste – you use only as much as you need. Simply cut an Isomode Pad to size and install under equipment. Results: Machines stay put without bolting, floors and building remain undamaged, working conditions are improved, and machine maintenance is cut.



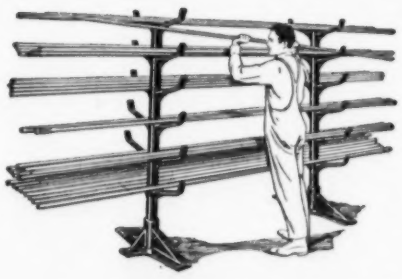
Try a package of Isomode Pads and see. Write for full details and price list. **Trade Mark*

IT PAYS TO KEEP A PACKAGE ON HAND

THE MB MANUFACTURING COMPANY, INC.
1066 State Street, New Haven 11, Conn.

For more details circle NED-207 J4 on enclosed inquiry slip

for EFFICIENT HANDLING and ORDERLY STORAGE



You save time, both in storing and in issuing, when you use Brown Sectional Racks. Open sides speed handling. Complete visibility permits quick selection to save mechanics' waiting time.

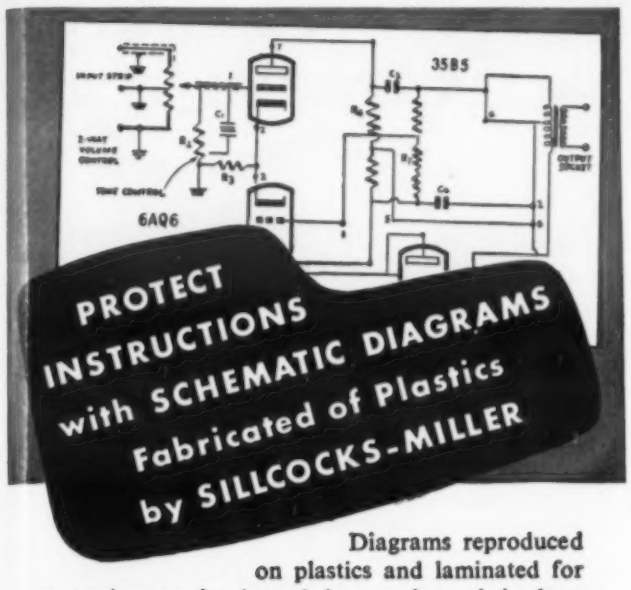
Maximum flexibility in arrangement is possible because each Brown Rack is independent and self-contained, need not be bolted to floor. Easily relocated. Systemized storage with Brown Racks promotes good housekeeping, cleanliness.

All iron and steel construction, can't burn, bend, sag or warp. Never wear out.

Get these values now! Write for complete specifications and prices on wide range of models and sizes. Brown Engineering Co. 129 N. Third St., Reading, Pa.

BROWN QUICK-SERVE RACKS

For more details circle NED-208 J4 on enclosed inquiry slip



Diagrams reproduced on plastics and laminated for protection can be depended on to keep their sharp definition and clean appearance. They are durable, easy to read, free from soil and damage.

Sillcocks-Miller specialists can help you create schematic diagrams to meet your needs exactly.

Write for details and send drawings for recommendation.

The SILLCOCKS-MILLER Company
Pioneers in Plastic Fabrication since 1910

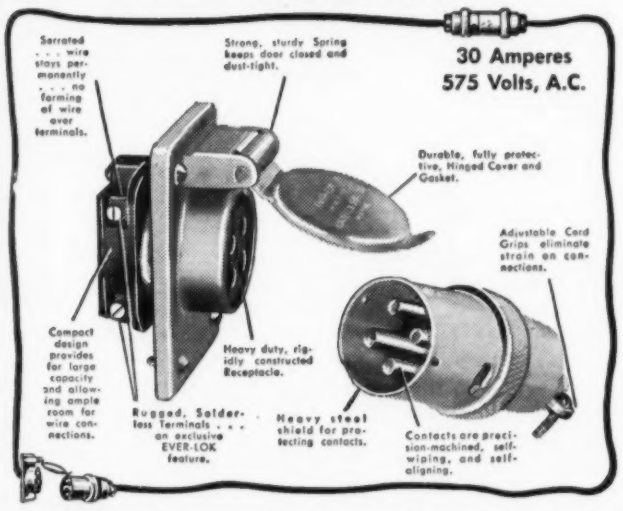
30 West Parker Avenue • Maplewood, N. J.

▲ For more details circle **NED-209 J4** on enclosed inquiry slip ▲

EVER-LOK®

R&S RECEPTACLES, PLUGS AND CORD CONNECTORS

...FOR HEAVY-DUTY UTILITY AND INDUSTRIAL APPLICATIONS



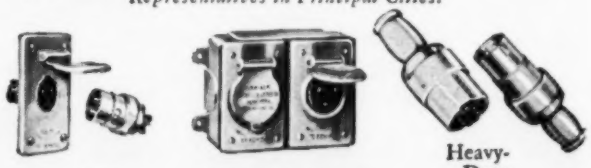
R&S Ever-Lok heavy-duty plugs and receptacles carry full-rated load currents safely and with the greatest of ease under severe operating conditions. Industry and Utilities specify these rugged cord connectors because Ever-Lok has the right combination of features for heavy-duty service applications.

Outstanding Ever-Lok advantage is an automatic locking grip that prevents faulty contacts and accidental disconnection in service. Every Ever-Lok plug grips fast and holds forever despite every tug or pull—yet separates instantly with a finger-tip twist of the powerful bayonet type lock.

Good products need good connections—and Ever-Lok always provides a happy ending to cord connector problems. *Write for literature EL-15*

• R&S Ever-Lok complete lines are available from Midget type 10 amperes to 200 amperes heavy service types . . . standard or reverse service . . . fused and non-fused types. Also a complete Ever-Lok Multi-circuit line from 2 to 12 poles, for sound and control equipment.

Representatives in Principal Cities.



Midget — 10, 20, 30 Amperes — Heavy-Duty Service

C8 RUSSELL & STOLL COMPANY, INC. • 125 BARCLAY STREET, NEW YORK 7, N. Y.

RUSSELL & STOLL

PRECISION-BUILT ELECTRICAL EQUIPMENT—SINCE 1902

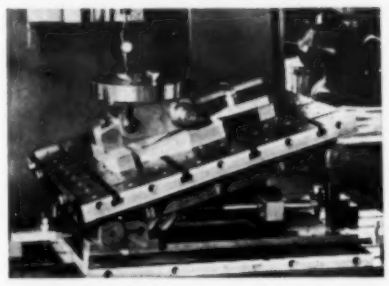
▲ For more details circle **NED-210 J4** on enclosed inquiry slip ▲

RUBBER-PLASTIC VALVE
has 150 psi working pressure

Increased capacity in corrosion-resistant piping systems handling food products, chemical solutions or acids is made possible by this lightweight, rubber-plastic valve body which features a 3-in. diameter. Valve body is made of Uscolite styrene copolymer which is odorless, tasteless and nonporous. It will not contaminate materials being handled, nor absorb ingredients of one batch for transmission to the next. Valves are molded in one piece. Working pressures range to 150 psi and temperatures to 170° F. Made by **Hills-McCanna Co.,** 2455 W. Nelson St., Chicago, Ill.

▲ For more details circle **NED-211 J4** on enclosed inquiry slip ▲

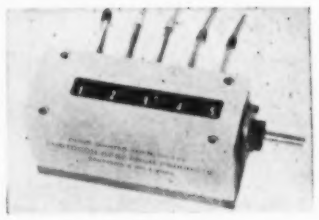
LARGE SINE PLATES
have mechanical raising and lowering



Single - angle nonmagnetic sine plates measure 24 x 24 in. and have mechanical raising and lowering for easy top plate adjustment. Two gaging pads are provided for positioning standard gage blocks for setup. Top and base plates are cast, scraped parallel to 0.0005-in. Distance between roll centers is 20 in. Maximum angle setting is 60 degrees. Made by **Omer E. Robbins Co.,** Dept. F, 24800 Plymouth Rd., Detroit, Mich.

▲ For more details circle **NED-212 J4** on enclosed inquiry slip ▲

TELEMETERING COUNTERS
for control, computing applications



Compact lightweight telemetering counters totalize and visually indicate shaft rotation in either direction in increments of 1/10-revolution. PC-500 series has an accurate electrical potentiometer on each counter wheel. Potentiometer resistance ratios are directly proportional to visual indication. CC-500 series contacting counters have electrical contacts corresponding to each number on the wheel. Both are suitable for control and computing applications, as well as for remote indication and recording of data. **Photocon Research Products,** 421 N. Foothill Blvd., Pasadena 8, Calif.

▲ For more details circle **NED-213 J4** on enclosed inquiry slip ▲

Severance **REGRINDING SERVICE**

RECONDITIONING TO *New Tool* PERFORMANCE AT A FRACTION OF *New Tool* COST

HIGH SPEED *We Regrind* MIDGET MILLS • ROTARY FILES BURRS • COUNTERSINKS • COUNTERBORES END MILLS • MILLING CUTTERS • REAMERS **CARBIDE**

AMERICAN MAJOR INDUSTRIES FINDS IT **PAYS**

American Major Industries are now sending their dull cutters to Severance for regrinding because they know (1) strategic material is being conserved (2) quick deliveries are assured (3) their reconditioned tools will give new-tool performance, and (4) their production costs are lowered. This SEVERANCE SERVICE is paying-out for others—It will Pay you too!

At SEVERANCE, New-Tool Craftsmen, using the same precise skill and care that they do in grinding new tools, regrind your cutters. Send in your dull cutters today!

SEND YOUR DULL CUTTERS TO

Severance TOOL INDUSTRIES INC.

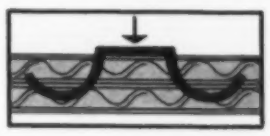
761 Iowa Avenue
Saginaw, Michigan

COMPLETE CATALOG INCLUDING REGRIND PRICES SENT ON REQUEST

▲ For more details circle **NED-214 J4** on enclosed inquiry slip ▲

LOOK! A SELF-CLINCHER!

No blade to insert!
Staple spreads itself under or inside the work!



Bostitch T5 Tacker → with outward clinch

Use it for stapling insulation around pipes and ducts ... fastening shipping tags to corrugated containers ... any job that calls for a blind clinch. By lightly pressing the handle you automatically drive a staple and turn its legs outward to clinch under or inside the work. Two models for light and medium staples. Call the Bostitch economy man in your area.

Fasten it better and faster with

For more information about the Bostitch T5 Tacker with outward clinch, write BOSTITCH, 689 Mechanic St., Westerly, R.I.

BOSTITCH
STAPLERS AND STAPLES

▲ For more details circle **NED-215 J4** on enclosed inquiry slip ▲

CAPCO Dock Covers completely enclose the space between car and building doorways protecting loading and unloading during bad weather...preventing accidents... insuring against loss of heat or refrigeration. 51 different models in any size for every loading problem.

CAPCO

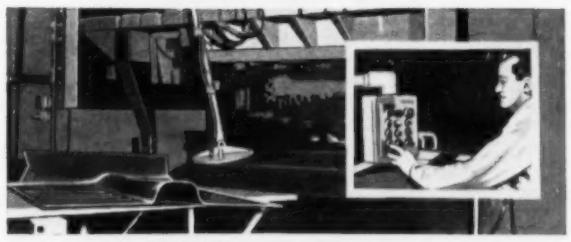
Write for literature and name of nearest distributor.

622-24 PROSPECT AVENUE • KANSAS CITY 24, MISSOURI

▲ For more details circle **NED-216 J4** on enclosed inquiry slip ▲

Push Button Control . . . .

PLANT AUTOMATION with VAC-U-LIFT



FLEXIBLE TO YOUR JOB

"Vac-U-Lift", the all purpose material handler is your answer to plant automation. Engineered for your specific needs, "Vac-U-Lift" lifts anything FASTER, BETTER AND CHEAPER.

"VAC-U-LIFT" automatically insures instant attachment and release. "Vac-U-Lift" pads of various sizes adapt themselves to your handling problem. FREE illustrated literature gives complete details. Write today.

BLAKESLEE VAC-U-LIFT

BLAKESLEE
MANUFACTURING COMPANY
SALEM, ILLINOIS

▲ For more details circle **NED-217 J4** on enclosed inquiry slip ▲

HOW TO RESTORE CONCRETE FASTER, BETTER—AT LOWER COST!

BONDACTOR Concrete Gunning Equipment
Saves Money, Makes Money
on Nearly Any Maintenance Job

Bondactor concrete gunning equipment pays for itself many times over with labor-saving, cost-cutting performance on a wide variety of concrete restoration and maintenance jobs.

The Bondactor is used to repair column and beam encasements, ramps, loading docks, walkways, stairways, floors and other damaged or deteriorated concrete. Also used for fire-proofing, waterproofing and wet and dry sandblasting.

BEFORE, this loading dock was so badly damaged and deteriorated, it could hardly be used. Without a Bondactor, top slab would have to be removed, forms made and concrete poured.

AFTER applying concrete with the Bondactor, it's set and ready to go! No forms required, minimum cleaning. Gives a denser, stronger, long-wearing surface.

WRITE FOR INFORMATION!
Investigate Bondactor equipment today! State intended use.

Air Placement
EQUIPMENT COMPANY
1008 West 24th Street
Kansas City 8, Missouri

▲ For more details circle **NED-218 J4** on enclosed inquiry slip ▲

"Maverick" usually spells trouble, to the production line as well as the open range. An unknown quantity, its performance and quality are questionable. For all solder products, there's never any doubt when you choose Kester ... the one "brand" that's always consistent, always dependable.

WRITE TODAY for Kester's *NEW* 78-Page Informative Textbook, "SOLDER . . its fundamentals and usage"

KESTER
SOLDER COMPANY
4249 Wrightwood Avenue • Chicago 39, Illinois
Newark 5, New Jersey • Brantford, Canada

▲ For more details circle **NED-219 J4** on enclosed inquiry slip ▲

SHENANGO *Centrifugal* CASTINGS ... *KEY TO SAVINGS*

Precision-machined by Shenango for paper making machinery are these two centrifugally cast bronze wire stretch rolls with Meehanite Metal heads and steel journals. Note the special water slinger ring on the head.

Shenango methods . . . Your gain!

SHOWN above are 15-foot wire stretch rolls of centrifugally cast bronze. From end to end, inside and out, these and all Shenango centrifugal castings are uniform in high quality.

The carefully controlled centrifugal casting process developed by Shenango assures exceptionally fine pressure-dense grain and freedom from costly imperfections. For you, these features mean trouble-free performance and wear resistance, minimum maintenance, and the ability to withstand abnormal loads and speeds. Yes, increased savings from every angle.

Shenango is prepared to supply either rough castings, semi-machined or precision-finished parts and assemblies in either ferrous or nonferrous metals. For further information and data on meeting specific needs, write to . . .

SHENANGO-PENN MOLD COMPANY
Centrifugal Castings Division
Dover, Ohio
Executive Offices: Pittsburgh, Pa.

SHENANGO
COPPER, TIN, LEAD, ZINC BRONZES • MONEL METAL
ALUMINUM AND MANGANESE BRONZES • NI-RESIST • MEEHANITE METAL

▲ For more details circle **NED-220 J4** on enclosed inquiry slip ▲

SPEED-REDUCTION DRIVES mount in vertical position

Shaft - mounted Shaft-King speed reduction drives are designed for applications where driven machine shaft is vertical or nearly so, as on mixers, agitators and liquid processing machines. Units can be supplied in both 13:1 and 20:1 ratios for requirements to 42 hp. They use forged alloy steel helical gears as well as both ball and tapered-roller bearings. Three-wall, internally-ribbed cast iron housing provides permanent gear and bearing alignment and extra-large oil reservoir. Optional torque-arm overload release protects driven machine, motor and drive where jam, choke or shock loads may occur. Made by **American Pulley Co.**, 4245 Wissahickon Ave., Philadelphia 29, Pa.

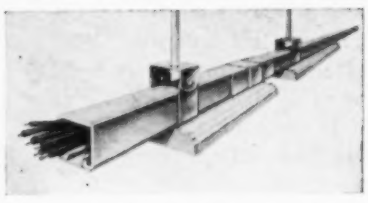
▲ For more details circle **NED-221 J4** on enclosed inquiry slip ▲

WELDING ROD for die-cast alloys

Low temperature oxyacetylene welding of die-cast alloys is possible with the Oxweld No. 49 welding rod. The extruded white metal rod flows smoothly and fuses rapidly without flux or excessive puddling. Satisfactory welds can also be made in most aluminum and magnesium-base die castings. Instructions for welding such die castings as those used in paint sprayers, fuel pumps, vacuum cleaners, coal stokers, motor and gear housings and portable tools are provided in each package. **Linde Air Products Co.**, Room 308-NED, 30 E. 42nd St., New York 17, N. Y.

▲ For more details circle **NED-222 J4** on enclosed inquiry slip ▲

METAL CHANNEL & FITTINGS have UL approval as surface raceway



Wire pulling is not necessary when Unistrut channel and fittings are used for wiring lighting installations and supplementary power wiring of machines, hand tools, motors, etc., as wires are laid in the channel. A closer strip snaps in place to close the channel slot. Hanger stems can be placed anywhere along the channel, to avoid obstructions and compensate for irregular ceilings. Fixtures can be attached at any point and supplementary lines can be tapped from the channel for other uses. They are UL-approved for above uses in P-1000, P-2000, P-3000 and P-4000 sizes for wiring up to 600 v. Made by **Unistrut Products Co.**, Dept. 75, 1013 W. Washington Blvd., Chicago 7, Ill.

▲ For more details circle **NED-223 J4** on enclosed inquiry slip ▲

Check with **FAIRFIELD** *for FINE GEARS*

Fine Gears Made to Order:
SPIRAL BEVEL
STRAIGHT BEVEL
HYPOID
HERRINGBONE
HELICAL
DIFFERENTIALS
SPUR
WORMS AND WORM GEARS

MASS production of fine gears is an accomplishment that requires the ultimate in manufacturing facilities and experience. And it's all here at Fairfield—metallurgical department, batteries of the most modern machines, complete heat treating equipment, all operated by skilled craftsmen producing truly fine gears. Here is more than 30 years of experience translated into the gear-making "know-how" that is essential to manufacturing high quality, dependable gears.

Our facilities are complete for producing gears for a wide variety of applications. Why not consult Fairfield on your next gear problem? Your inquiry will receive prompt attention.

FAIRFIELD MANUFACTURING CO.
2335 S. Concord Road Lafayette, Indiana

▲ For more details circle **NED-224 J4** on enclosed inquiry slip ▲

ITS FELT TIP WRITES ON EVERYTHING!

in BOLD or *fine* lines

Marking steel drums, tools, parts, pipes, etc. is smooth sailing with the Flo-master Felt-Tip Marker.

The complete range of ten colors in Flo-master Inks permits speedy and accurate identification for assembling, stocking, inspecting.

Flo-master semi-opaque inks — waterproof, non-smudging, fast-drying — are recommended for hard-to-mark surfaces using the KING SIZE Flo-master. For general purpose marking—cartons, cases, etc—use Transparent Inks with POCKET SIZE Flo-master (illustrated).

Contact your supplier or write direct to Cushman & Denison Manufacturing Co., 153 West 23rd Street, New York 11.

Flo-master
FELT-TIP MARKER

▲ For more details circle **NED-225 J4** on enclosed inquiry slip ▲

Smoke, Sun, Salt Laden Air won't hurt this REINFORCED PLASTIC DOME

Protecting the valves and tops of this PYROFAX gas cylinder from snow, water, and falling objects is a year-round job.

That's why these detachable domes are molded from reinforced plastics made from glass fibers and BAKELITE Polyester Resins. They're lightweight, tough, strong and are resistant to corrosive atmospheres, moisture, and salt laden air. No coatings are needed. They are included in the operating equipment approved by Underwriters' Laboratories.

Production is easy with reinforced plastics made of BAKELITE Polyester Resins and glass fibers, bringing lower costs in many cases. Moldings as large as auto bodies and aircraft radomes are being made from these same materials.

Bakelite Company is the one source that supplies a variety of polyester resins, as well as epoxies, phenolics, and epoxy-phenolics for reinforced plastics. It can also help make your application a success through its vast technical resources and years of experience in working with plastics. To learn how much this can mean, write Dept. ZC-53, stating your problem.

"Pyrofax" is a registered trade-mark of Pyrofax Gas Corp., a unit of Union Carbide and Carbon Corporation.

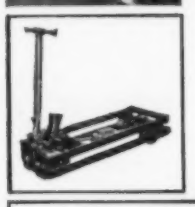
Covers molded by Molded Fiber Glass Co., Ashtabula, Ohio, and Woodall Industries, Inc., Detroit 34, Mich.

BAKELITE
TRADE-MARK
POLYESTER, PHENOLIC, AND EPOXY RESINS FOR REINFORCED PLASTICS

TRADE MARK

BAKELITE COMPANY
A Division of
Union Carbide and Carbon Corporation
UCC
30 East 42nd Street, New York 17, N. Y.

▲ For more details circle **NED-226 J4** on enclosed inquiry slip ▲



REVOLVATOR *RED-GIANT* features Safety-Ease

Durability—built in by 50 years of Revolvator Co. experience—is still the fundamental of the Red Giant liftruck line. Maneuverability, plus the safety of their exclusive double stroke mechanism, make the models shown leaders in their fields. There is a Red Giant liftruck available for every use—for every capacity.

Write for the full facts today.

REVOLVATOR CO.
8732 Tonnele Ave. North Bergen, N. J.

For more details circle NED-227 J4 on enclosed inquiry slip

Work with asphalt? mayonnaise? resins?

Just a flick of a switch, then read the Brookfield dial, and you have your viscosity determination in centipoises. The whole operation, including cleaning up, *takes only a minute or two.*

Available in a variety of models suitable for extremely accurate work with both Newtonian and non-Newtonian materials, Brookfield Viscometers are portable and plug in any A.C. outlet. *Write today.*

An Illinois company using Brookfield Viscometer 60 times a week on resin solutions reports: "Has enabled more efficient viscosity control as plant personnel can conduct tests without waiting for laboratory analysis."

Write Dept. O., Stoughton, Mass.

BROOKFIELD ENGINEERING LABORATORIES, INC.

For more details circle NED-228 J4 on enclosed inquiry slip

NEW PORTABLE BAND SAW

Cuts metal 15 times faster than a hack saw!

Cuts thru 1½" cold roll steel in 41 secs.! That's 15 times faster than a hand hack saw . . . 2½ times faster than larger power hack saws! Handles all materials up to 3¼" dia. round, 3¼" x 4¼" rectangular.

Portable, compact, light—take Porta-Band anywhere, use in any position. Powered for heavy duty. Eliminates fatigue—cuts costs.

WRITE TODAY for full information

PORTER-CABLE Machine Co.
2409 N. Salina St.
Syracuse 8, N.Y.

Porter-Cable *Quality Electric Tools*

For more details circle NED-229 J4 on enclosed inquiry slip

SAFETY LOCKOUT for switch and fuse boxes

Up to six padlocks can be placed on this multiple lockout device for electric fuse and switch boxes. Used for safety purposes when working on machines and equipment controlled by a common switch box, it prevents injury and damage to equipment resulting from one man throwing switch before others have finished their work. All men must remove their padlocks before switch can be operated. Device is made from zinc plated steel and opens and closes scissor-fashion. Jaws at ends provide secure lock around switch levers, handles and lock holes. Made by **Industrial Products Co.,** 2807 N. Fourth St., Philadelphia 33, Pa.

For more details circle NED-230 J4 on enclosed inquiry slip

EXTENSIBLE WORK TOWERS platform heights are 32 and 40 ft

Designed for mounting on pickup, utility, industrial or other trucks, series 3 and 4 Hi-Ranger extensible personnel towers are used for inspection, maintenance, and similar high level work. Maximum platform heights of the two models are 32 and 40 ft. Series 3 can be mounted on ¾-ton or larger trucks, series 4 on 1½-ton trucks. Major alterations to truck are seldom required, and it can usually be driven at highway speeds to and from jobs. Seamless steel tubing booms are powered by hydraulic system driven by the vehicle's engine, and fast-acting hydraulic outriggers are provided for stability. Standard platform weight capacities are 250 and 300 lb. Glass fiber insulated models are available for electrical work. Made by **Mobile Aerial Towers, Inc.,** 1405 N. Clinton St., Ft. Wayne 3, Ind.

For more details circle NED-231 J4 on enclosed inquiry slip

Hydraulic Lifts

Lee Engineering Co.—Twenty basic models of manual and battery operated hydraulic lifts are illustrated and described in 8-page catalog 554. The 1000-lb capacity units lift from 52 to 78 in., depending upon model, and are equipped with platform or forks and 5-in. roller bearing wheels.

For more details circle NED-232 J4 on enclosed inquiry slip

NOW...to handle those difficult PIPING PROBLEMS

offers a complete line of BELLOWS *Made of Teflon* to provide Chemical Inertness...Long-Life Flexibility ...Elimination of Electrolysis...Operation Over Wide Temperature Range*

"John Crane" Bellows offer a positive answer in the transmission of "hard-to-handle" liquids and gases. Applications include vibration dampeners, expansion joints and connectors for misaligned couplings.

Made from a special densely molded stock and so machined that there is no inherent stress at their free length—they expand and contract with equal freedom of motion. End flanges of French-type gasket construction facilitate easy assembly and assure a leak-proof seal. Available in a full range of standard pipe dimensions from 1 to 8 in.

Bellows also available in a wide range of designs for metering pumps, pressure accumulators, batching scale connectors, etc.

Send now for full information, including illustrated catalog, *The Best in Teflon.* Crane Packing Co., 1811 Cuyler Avenue, Chicago 13, Illinois.

**Du Pont trademark*

JOHN CRANE CRANE PACKING COMPANY

In Canada: Crane Packing Co., Ltd., 617 Parkdale Ave., N., Hamilton, Ont.

For more details circle NED-233 J4 on enclosed inquiry slip

Hammond of KALAMAZOO FOR DEBURRING

It is amazing how soon these Abrasive Belt Machines pay for themselves.

11 combinations available with or without Duskolector.

"Clip" this ad to your letterhead: 20 page catalog will be sent at once.

Hammond Machinery Builders
1623 DOUGLAS AVENUE ~ KALAMAZOO, MICHIGAN

For more details circle NED-234 J4 on enclosed inquiry slip

Easy rolling and greater cushioning make Goodyear's new XTRA CUSHION solid tire in the All-Service tread (below) a high favorite with truck operators and plant owners.

Goodyear Job-Fitted Industrial Tires CUT TIRE COSTS!

All-Service Tread Xtra Cushion

Smooth-Solid

All-Weather Tread

Rib-All-Weather Pneumatic

Semi-Pneumatic Cushion

Tread Design Is Job-Fitted

The right tread design for your operation. Smooth and Grooved for easy rolling. All-Service or the famous All-Weather wherever traction is needed.

Compound Is Job-Fitted

The right compound for outstanding performance. Your choice of either UNiversal chip-resistant or Neoprene oil- and acid-resistant compound *at no extra cost!*

Size Is Job-Fitted

The right size for every job. Over 100 different solid types and sizes plus a full line of pneumatic and semi-pneumatic tires make Goodyear Industrial Tires America's most complete line!

Learn how this right combination of size, tread design and compound can cut your industrial tire costs. Call your Goodyear Dealer for a free Industrial Tire Appraisal or write:

Goodyear, Industrial Tire Sales
Akron 16, Ohio

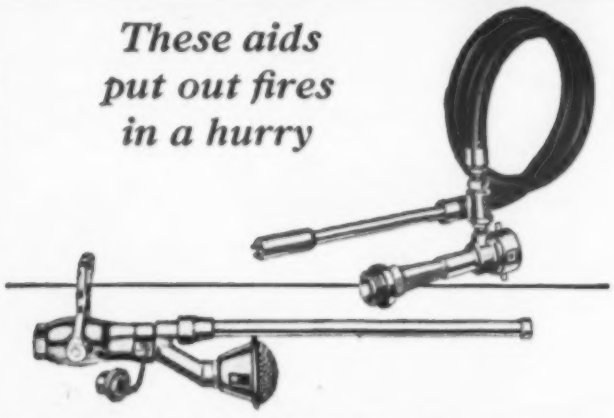
USE THE RIGHT TIRE FOR THE RIGHT JOB-USE

GOODYEAR INDUSTRIAL TIRES

All-Service, All-Weather, Xtra Cushion—
T.M.'s The Goodyear Tire & Rubber Company, Akron, Ohio

For more details circle NED-235 J4 on enclosed inquiry slip

These aids put out fires in a hurry



Rockwood's FOAM Eductor *automatically* proportions 3 parts of firefighting Rockwood FOAM into 97 parts of water. Can also be used wherever one liquid is being fed into another on a fixed percentage basis. "Tapped" into the line containing the basic liquid, it automatically introduces the other liquid into the line at a pre-determined rate.

Rockwood's versatile Type SG-60 Nozzle provides 5 types of Rockwood discharge—FogFOAM, straight solid FOAM, high velocity WaterFOG, low velocity WaterFOG or straight water stream.

For complete details, send for Rockwood's free, illustrated catalog, "Fire Fighting Products." Rockwood Double Strength FOAM available in 5-gallon cans or 50-gallon drums. Rockwood WET available in 5-gallon cans or 50 gallon drums. Distributors in all principal cities.

ROCKWOOD SPRINKLER COMPANY

Engineers Water . . . to Cut Fire Losses

PORTABLE FIRE PROTECTION DIVISION

349 HARLOW STREET, WORCESTER 5, MASSACHUSETTS

▲ For more details circle NED-236 J4 on enclosed inquiry slip ▲

A NEW PROCESS..

ultrasonic machining

For Cutting Hard or Brittle Materials Like:

ALNICO	CERAMICS	QUARTZ
BORON CARBIDE	FERRITES	TUNGSTEN
CARBON	GLASS	TUNGSTEN CARBIDE
	MOLYBDENUM	

HOW CAN YOU USE IT . . . . . ?

Ultrasonic Abrasive Machining is finding ready application in many fields for forming, grinding, slicing, trepanning or cutting shaped holes in hard or brittle materials. Investigate the possibilities in your field. Write for descriptive bulletin and information on specific applications. Please specify materials to be worked and describe operation.

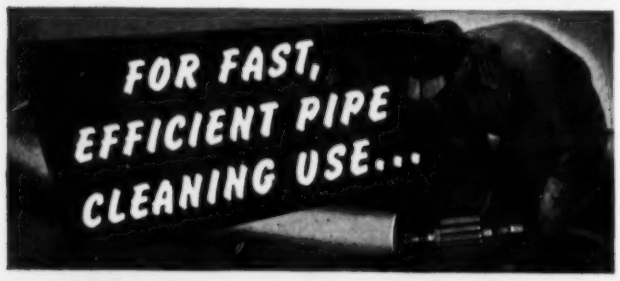
Address Inquiries to Dept. 6120-NE

RAYTHEON

RAYTHEON MANUFACTURING COMPANY
Equipment Sales Division, Waltham 54, Mass.

DISTRICT OFFICES: Boston • New York • Cleveland • Chicago
New Orleans • Los Angeles (Wilmington) • San Francisco • Seattle
INTERNATIONAL OPERATIONS, 589 FIFTH AVENUE, NEW YORK CITY

▲ For more details circle NED-237 J4 on enclosed inquiry slip ▲



LAGONDA TUBE CLEANERS

Motor with Quick Repair head and sleeve for 10" straight pipe. A universal coupling would be used between the motor and head for curved pipe cleaning.

This rugged, air or steam driven motor, teamed with a wide selection of cutter heads, will clean any pipe up to 20" I.D. New or used . . . straight or curved. It makes short work of rust, weld spatter, sand, mill scale, etc. Yet, the tough cutter heads will not mar inner pipe surfaces. They are widely used throughout the pipe manufacturing and fabrication fields today.

For full details see your local Elliott representative or write for Bulletin Y-34. Elliott Company, Springfield, Ohio.

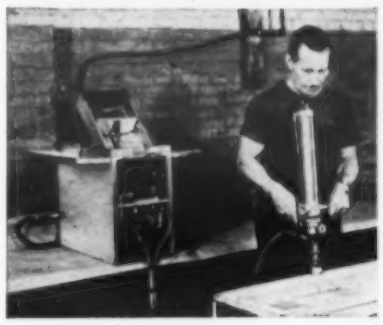
Y4-11

ELLIOTT Company

STEAM TURBINES • MOTORS • GENERATORS • DEAERATING HEATERS • EJECTORS
CONDENSERS • CENTRIFUGAL COMPRESSORS • TURBOCHARGERS • TUBE CLEANERS • STRAINERS

▲ For more details circle NED-238 J4 on enclosed inquiry slip ▲

PORTABLE NAIL DRIVER
has automatic hopper feed



Single stroke of this portable nail driver sinks each nail completely. From 40 to 50 nails can be driven per minute for sustained periods and more than 60 per minute in brief spurts. Driver operates by compressed air, requiring 14.7 cfm at 80 to 90 psi. Tool consists of an automatic hopper feeding unit weighing 65 lb, a driving unit weighing 8½ lb and a length of nail-feeding plastic hose connecting them. Nails used may range from 4 to 8-penny in size. Capacity of oscillating hopper is 8 lb of nails. They may be driven flush or countersunk or, by driving against a steel backplate, clinched. Standard length of nail feed hose is 25 ft, but driver can be at distances up to 50 ft from hopper. Made by **Morgan Machine Co.,** 1162 University Ave., Rochester 10, N. Y.

▲ For more details circle NED-239 J4 on enclosed inquiry slip ▲

MILLING MACHINE
standard head has ¾-hp motor and six speeds from 450 to 6400 rpm

Medium-size ram-type milling machine for tool room and production use features table sizes of 9 x 36 in. with 22 - in. longitudinal travel and 9 x 42 in. with 28-in. longitudinal travel. Designated model 1½ V, machine is equipped with type 4 quill type milling head for close tolerance work. Quill has 3½ in. of travel and its weight is adjustably compensated. Standard head has ¾-hp motor, while 1 or 1½-hp units are optional. Both lever and hand wheel feed are provided.

Standard six-speed head has range from 450 to 6400 rpm. With optional back gear unit, eight speeds from 150-6400 rpm, or 16 speeds from 75-6400 rpm are available. Heavy duty dovetail ram assembly with rack and pinion for positioning has 12½-in. standard ram travel or 20½-in. optional ram travel. Built-in worm adaptor positions head at desired angle. Built by **Fray Machine Tool Co.,** 2933 N. Ontario St., Burbank, Calif.

▲ For more details circle NED-240 J4 on enclosed inquiry slip ▲

AIR CYLINDER WITH CHOICE OF BUILT-IN VALVES

The Bellows Air Motor—the only air cylinder with *built-in* valve and operating controls — now offers a choice of six separate valving arrangements. Now the engineer can choose the method of valving he prefers and still have all the advantages that integral construction means: jet-quick action, compactness, sure-fire control, simple installation.

Learn more about this newest development in the Bellows Air Motor. Write for your copy of Bulletin CL-50, just off the press. Address Dept. NED-954,

The Bellows Co.

ESTABLISHED 1911

AKRON 9, OHIO

701A

▲ For more details circle NED-241 J4 on enclosed inquiry slip ▲

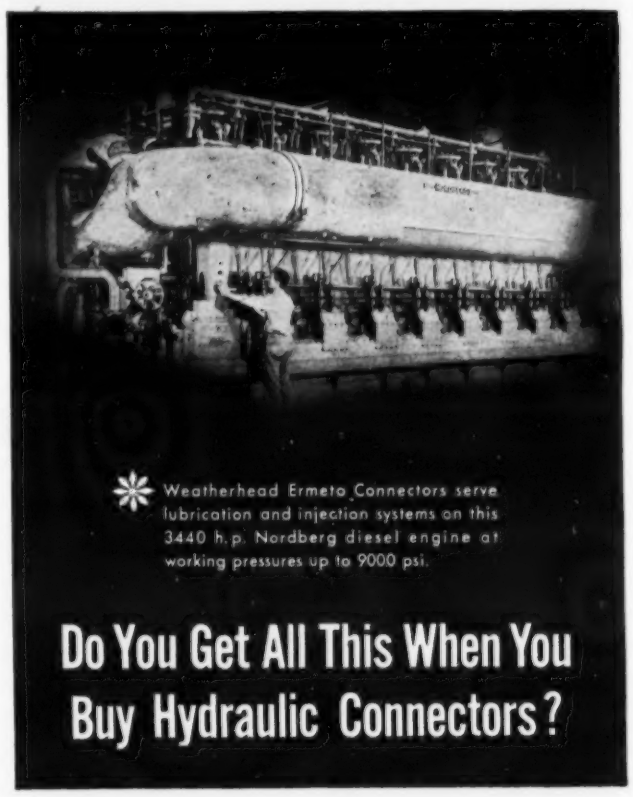
SLY "ECONOMY" DUST FILTERS
Small, Compact, Inexpensive

The Sly ECONOMY Dust Filter is especially suited for collecting the dust from individual machines or from a small group of dust points in close proximity to each other. It is compact yet it has an abundance of filter cloth which helps to maintain a uniform suction.

This filter offers: (1) *High Efficiency* with complete dust collection; (2) *Low Power,* a 3 HP motor will handle 1400 cu. ft. per minute; (3) *Long Life* because a very liberal amount of filter cloth is used; (4) *Compactness* because the filter cloth occupies a minimum of space; (5) *Effective Bag Cleaning* by means of a simple shaking device.

Made in four standard sizes, to filter dust out of 300 to 1400 cu. ft. air per minute. Write **The W. W. Sly Manufacturing Co.,** 4748 Train Avenue, Cleveland 2, Ohio. There are experienced Sly engineers in New York, Chicago, Philadelphia, Syracuse, Detroit, Buffalo, Cincinnati, St. Louis, Minneapolis, Birmingham, Los Angeles, Toronto. Advt.

▲ For more details circle NED-242 J4 on enclosed inquiry slip ▲



☐ FIELD ENGINEERING SERVICE?

☐ PROGRESSIVE PRODUCT DESIGN?

☐ SIMPLIFIED ORDERING AND INVENTORY?

☐ QUALITY MATERIALS AND MANUFACTURE?

those who buy WEATHERHEAD do!

▲ For more details circle NED-243 J4 on enclosed inquiry slip ▲

AMPLICALL equips your business with a pressure-easing internal communication system. Its "clear line" facilities provide *2-second speech contact* within and between departments. AMPLICALL frees your busy switchboard for important outside calls—keeps personnel *on the job*—keeps talk terse—saves "waiting and walking" time. Today, more than ever, your business needs pressure-easing, time-saving AMPLICALL. There is a system to fit your special needs. Get the full facts today!

SEE YOUR PHONE BOOK
For your nearest AMPLICALL specialist, look under "Intercommunication" in your classified phone directory—or write direct for full information.

ELECTRONIC AMPLICALL INTERCOMMUNICATION

RAULAND-BORG CORPORATION
3515-D Addison St., Chicago 18, Ill.

▲ For more details circle NED-244 J4 on enclosed inquiry slip ▲

ERMETO®

The Mark of Quality

ERMETO the original flareless fitting—provides a positive, leakproof, vibration-resistant seal at any pressure. Because there's no flaring, threading, welding or soldering, you can make an Ermeto connection in 30 seconds with a wrench as your only tool.

With the patented Ermeto design, a case-hardened sleeve actually shears a groove into the outer surface of the tube and bows when the nut is tightened. This cutting and bowing action assures a positive seal . . . a joint you can disassemble and reassemble over and over again.

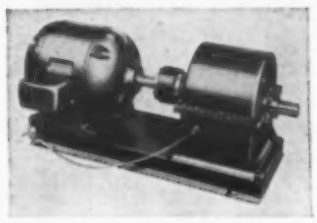
Designed for high-pressure use, Ermeto has simplified tube connections and cut costs so successfully that many companies standardize on Ermeto for all joints, thus reducing inventory problems. Ermeto is made in steel, stainless steel and Monel, ⅛" to 2" O. D. Weatherhead field engineers can provide detailed data and counsel on applications. Or write for Ermeto Catalog E-1457. The Weatherhead Company, Dept. F-2, 300 East 131st Street, Cleveland 8, Ohio.

YOU'RE AHEAD WHEN YOU SPECIFY . . .
WEATHERHEAD

This trademark appears on every make of car, truck, bus, and tractor on equipment for machine tools, diesel and hydraulic applications on equipment for instrumentation, oil drilling, mining, road building for aircraft, railway, and marine engines for LP-Gas and anhydrous ammonia control equipment this symbol represents more than 1500 products made by Weatherhead

▲ For more details circle NED-245 J4 on enclosed inquiry slip ▲

VARIABLE SPEED LIQUID DRIVE transmits power through fluid medium for conveyors, mixers, fans or pumps



Conveyors, mixers, coilers, crushers and ball mills, fans and pumps and synchronous motors constitute typical equipment with which model VSL Power Mate variable speed liquid drive can be used. Power is transmitted from motor drive shaft through fluid medium contained within the coupling unit and by means of impeller and runner rotors. Varying amount of fluid contained within working elements varies amount of energy transmitted. This fluid variation is controlled by scoop tube device.

The hydraulic coupling provides such advantages as control of speed acceleration and load; rapid declutching of driven equipment; adaptability to automatic control; no-load starting; and shock and overload protection through fluid slippage factor. Six models with ratings from 1 to 150 hp have synchronous motor speeds from 1800 to 750 rpm. Made by **Liquid Drive Corp.**, Holly, Mich.

▲ For more details circle NED-246 J4 on enclosed inquiry slip ▲

INDUSTRIAL PAGING SYSTEM combines sound paging with two-way intercommunication

Sound paging is combined with two-way intercommunication in the Executone industrial paging system consisting of any number of handset stations, reproducers and a control rack. Page call can be made from any station and is amplified over all reproducers in the plant. Paged person can answer from nearest station and is put in two-way voice contact with caller simply by picking up handset. If conference is necessary, several persons can talk with each other over system at one time.

Hand set stations are either wall-mounted or desk type. Trumpet-type reproducers have adjustable bracket for wall, ceiling or pillar mounting. Explosionproof trumpets for hazardous locations are available. In the 66½ x 22½ x 16½-in. control rack are located relay-controlled amplifier and other components. Made by **Executone, Inc.**, Dept. C, 415 Lexington Ave., New York 17, N. Y.

▲ For more details circle NED-247 J4 on enclosed inquiry slip ▲

COMAR RELAYS

for countless industrial and military applications

Aircraft Controls
Business Machines
Radar Systems
Communications
Transcribers
Coin Machines
Guided Missiles
Test Panels
Computors
Electric Timers
Tape Recorders
Generator Controls

Leading manufacturers have consistently "approved" Comar Relays for use in their products. Superior in efficiency, more dependable in operation, Comar custom-engineered relays will help your product perform better.

We specialize in solving relay problems. Send your specs for our recommendations. No obligation.

Comar ELECTRIC COMPANY
3349 Addison Street, Chicago 18, Illinois

RELAYS • SOLENOIDS • COILS • TRANSFORMERS • SWITCHES • HERMETIC SEALING

▲ For more details circle NED-248 J4 on enclosed inquiry slip ▲

GRIPPER Woven Wire SLINGS

for LOWEST SLING COST

LOWEST SLING COST—because they last longest! Gripper slings are all-metal, won't rot, cut or tear . . . even from handling sharp edged loads or severe use. What's more, their unique spiraled loop construction prevents kinking, tangling, snarling, and eliminates flexing of individual wires to prevent metal fatigue.

WIDEST USE—broad flat sling body gives greater bearing surface. You can lift loads with a single Gripper sling that would require bridling with other types. Specially designed handles provide either basket or choke hitch. Fully flexible sling body wraps completely around any load . . . even small radius bundles . . . in choke rig, thus, grips entire load tightly, eliminates slipping.

WIDE RANGE OF CAPACITIES—up to 100,000 lbs. in standard lengths and widths. Special sizes and capacities on request.

The Cambridge Wire Cloth Co.
Dept. R • Cambridge 9, Md.

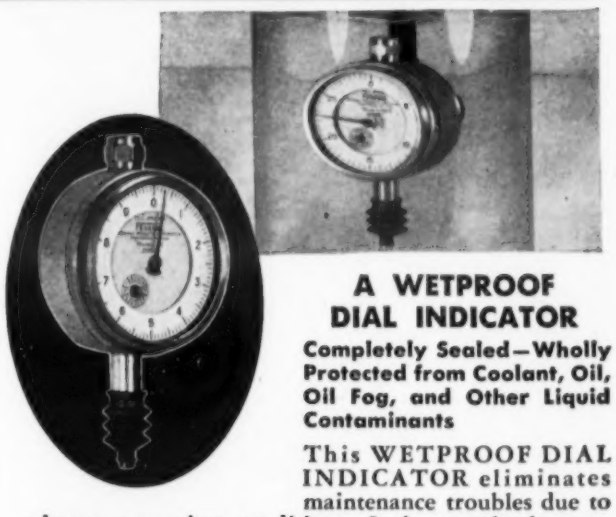
WIRE CLOTH | METAL CONVEYOR BELTS | SPECIAL METAL FABRICATIONS

OFFICES IN LEADING INDUSTRIAL AREAS

FOR FULL DATA . . . see your mill supply, materials handling or safety equipment distributor. Or, write direct for FREE CATALOG and name of nearest distributor.

DEALERS: ask about open territory data

▲ For more details circle NED-249 J4 on enclosed inquiry slip ▲



A WETPROOF DIAL INDICATOR

Completely Sealed—Wholly Protected from Coolant, Oil, Oil Fog, and Other Liquid Contaminants

This WETPROOF DIAL INDICATOR eliminates maintenance troubles due to adverse operating conditions. It is completely wetproofed and built unusually rugged to withstand heavy handling. The crystal is of GLARE-PROOF GLASS and will not discolor when exposed to oil or other staining liquids. Wetproof Indicators are regularly furnished with revolution counter and Cushion Movement. They are available in "C" size (2¼" O. D.) and made to AGD specifications (except for minor variations). Write FEDERAL PRODUCTS CORP., 4179 EDDY STREET, PROVIDENCE 1, RHODE ISLAND.

Ask FEDERAL FOR ANYTHING IN MODERN GAGES...

Dial Indicating, Air, Electric, or Electronic — for Inspecting, Measuring, Sorting or Automatically Controlling Dimensions on Machines

▲ For more details circle NED-250 J4 on enclosed inquiry slip ▲

NEW Mall

MIDGET AIR DIE GRINDER

This 12 ounce, palm-size midget creates a sensation in every shop in which it is introduced. A precision Erickson collet die grinder for day-long production. For use with mounted points and carbide burrs where accuracy is a "must". Features a new "patented" noise silencer that makes it a pleasure to use.

Model No.	Speed (rpm)	Collet Size	Side to Center	O. A. Length
PG-K-1030L	30,000	¼"	⅝"	4⅝"

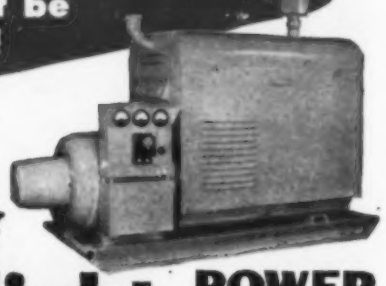
40 Factory-Owned Service Warehouses, Coast to Coast, to Give You Fast, Dependable Service.

MALL TOOL COMPANY PORTABLE POWER TOOLS GASOLINE • ELECTRIC • AIR
7727 S. Chicago Ave., Chicago 19, Illinois
RUSH me free copy of MALL Pneumatic Tool Catalog.
Name
Company
Address
MU-122

▲ For more details circle NED-251 J4 on enclosed inquiry slip ▲

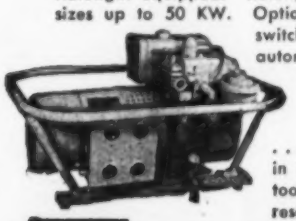
POWER Breakdowns need not be costly!

KEEP PRODUCTION MOVING WITH AN...



Emergency Katolight POWER PLANT!

Vital electrically operated equipment can continue to function in spite of normal power failure, when your plant is Katolight equipped. Katolight Units are available in standard sizes up to 50 KW. Optional safety and signal controls and switches that transfer load to emergency automatically. Also Katolight A.C. Generators to 300 K.W. Motor-Generator Sets, Rotary Converters and Motors.



Katolight Portable Plants . . . speed work crews, cut costs. Plug in time-saving electrical equipment and tools. Ideal for civil defense, fire and rescue squads. In use the world over.

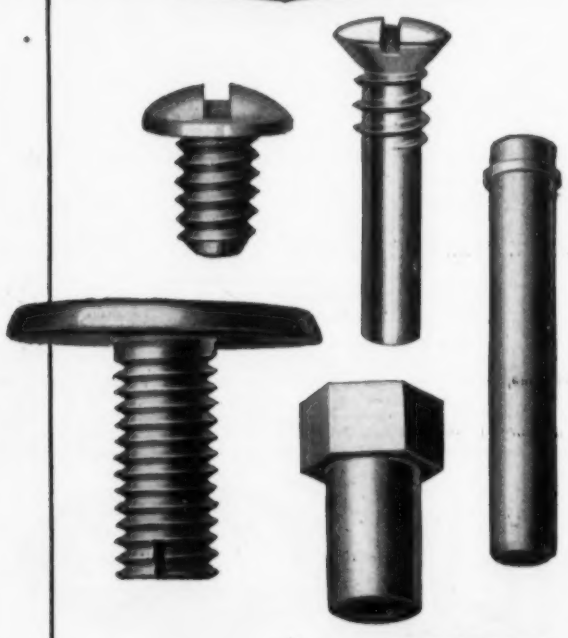
Katolight CORPORATION FREE! Write For Folder

Box 491-76 Mankato, Minnesota

For more details circle NED-252 J4 on enclosed inquiry slip

ELCO

Specials



FOR EXAMPLE

This stainless steel part was formerly made by another method of manufacturing. By using the Cold Heading method to produce this part, a savings of $46.15 per thousand was realized by the customer.

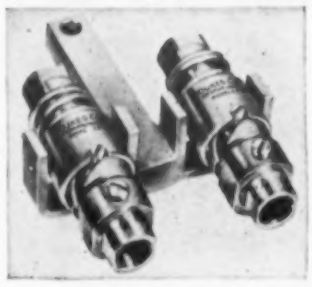
OVER 30 YEARS EXPERIENCE MAKING SPECIALS AND STANDARDS

ELCO TOOL AND SCREW CORPORATION

1946 BROADWAY • ROCKFORD, ILLINOIS

For more details circle NED-253 J4 on enclosed inquiry slip

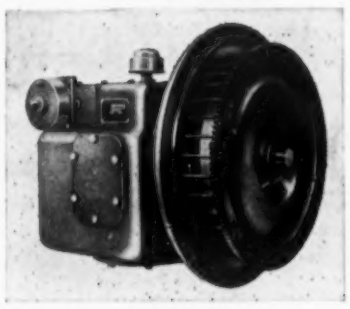
BREAK-AWAY COUPLER
has nylon self-sealing seats



Break-away coupler for "pull-behind" equipment couples with full pressure on both sides of line. It is available with tandem mounting, as in illustration, or mounted individually. Applications include earth moving and materials handling equipment and machine tools. Coupler is positive-acting, withstands rough usage and is designed to meet equipment manufacturers requirements. It has nylon valve seats to insure positive self-sealing. Made by **Dukes Co.**, Dept. C, 2108 N. Southport Ave., Chicago 14, Ill.

For more details circle NED-254 J4 on enclosed inquiry slip

PLANETARY TRANSMISSION
for use with torque converter on various types of equipment



Shifting from full speed forward to full speed reverse, in only 1½ seconds and without vibration or jerk, is possible with the PGT-150 Plan - Gear transmission. It is a compounded double planetary type transmission of 150 lb-ft input torque for use with a torque converter having a 2.12 multiplying factor. It can be used on fork lift trucks, hoists, car pullers, earth movers and machine tools.

Hydraulic pressure for actuating controls, internal lubrication and flow to torque converter is supplied by a built-in oil pump. Control is obtained by moving a single hydraulic valve lever. Operator can switch hydraulic pressure at any speed, at any time, to any position to start, to neutral or to vary speed or direction. Ratios are 1:1 in high, 3:1 in low and 3.2:1 in reverse. Power take-off apertures are on both sides of the transmission. Made by **American Gear & Mfg. Co.**, 104 New Ave., Lemont, Ill.

For more details circle NED-255 J4 on enclosed inquiry slip

Heliweld Process & Equipment

Air Reduction Sales Co.—Features of the Heliwelding process and the equipment used with it are detailed in 16-page illustrated catalog ADC 709B. Actual welding operation is described, along with air or watercooled manual holders, light or heavy duty water cooled machine holders and an automatic head. Automatic hardfacing process using a vibratory feeder is also shown.

For more details circle NED-256 J4 on enclosed inquiry slip

FOR ANY PLANT WITH 5 PSI STEAM & UPWARD

HYDRAULIC JET CLEANER

Leading sanitation authorities recommend this means of hydraulic scrubbing which is incomparable to any other cleaning method.

LEAST EXPENSIVE TO BUY & OPERATE

Only plant steam and cold water required for operation. Affords maximum safety. Has no moving parts, thus minimizes servicing and repairs.

MOST EFFECTIVE FOR HEAVY DUTY CLEAN-UP

Propels a solid jet of high pressured hot water and detergent. Completely cleans areas up to 30 ft. from operation point—even inaccessible machinery parts. Removes all sludge, soil and encrusted deposits.

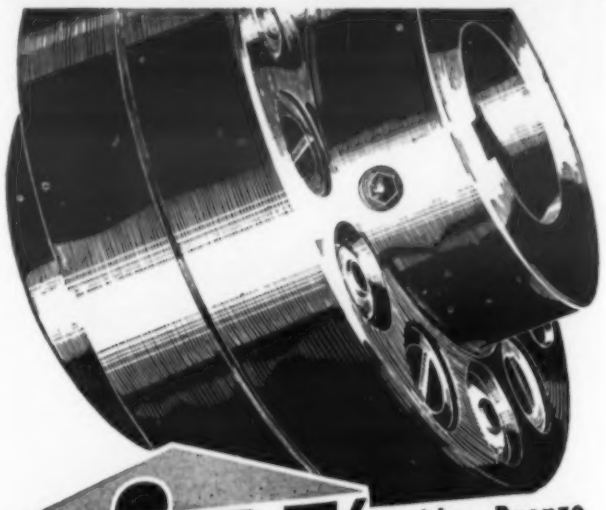
Write for literature & name of distributor

Injector Since 1848

SELLERS CORPORATION

1600 Hamilton Street Philadelphia 30, Pa.

For more details circle NED-257 J4 on enclosed inquiry slip



AJAX Rubber-Bronze Bushed flexible couplings

standard for 33 years

● Design engineers approve Ajax Flexible Couplings for protecting bearings, armatures, rotors and other vital, expensive parts. Hundreds of thousands in use. *Ajax knows couplings.* Write for new Catalog No. 55.

AJAX FLEXIBLE COUPLING CO. INC. • WESTFIELD, N. Y.

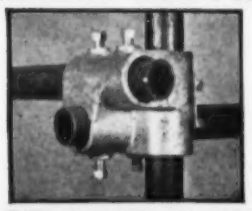
For more details circle NED-258 J4 on enclosed inquiry slip

MAKE YOUR OWN

ADJUSTABLE SCAFFOLDS and MATERIAL RACKS

WITH

AMIDON FITTINGS



AND STANDARD PIPE

THE MOST ECONOMICAL

AMIDON ENGINEERING CO.

ELYRIA 20, OHIO

For more details circle NED-259 J4 on enclosed inquiry slip

CORDS

complete line of...

MALE ATTACHMENT CAPS

Meet New National Electrical Code

You can get delivery NOW from Cords on a *complete line* of molded rubber plugs with blades and grounding pin positioned according to the new regulations. UL approved. Straight or right angle. Parallel blades for 15 Ampere-125 Volt, or tandem blades for 15 Ampere-250 Volt. Cover range of wire gauge sizes from 12-3S to 16-3SJ, inclusive. Get set now for the changeover.

Write for Descriptive Bulletin C 442

These are two of Cords complete line of new molded rubber attachment plugs.

WIRE SX PRODUCTS

CORDS LTD.

DIVISION ESSEX WIRE CORPORATION

121 DODGE STREET, DEKALB, ILLINOIS

For more details circle NED-260 J4 on enclosed inquiry slip

Use Schrader flow control valves to improve Air Cylinder Performance

Positive control of compressed air is provided by **Schrader Flow Control Valves.** They control piston speed in either direction without reducing the force.

An adjustment screw permits quick increase or decrease of flow, from zero to full.

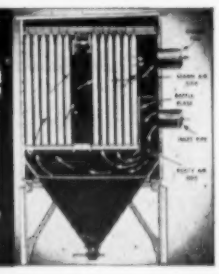
Available in five sizes, ⅛" to ¾" thread, and made of corrosion-resisting materials throughout, Schrader Flow Control Valves have simple construction readily serviced without being removed from the line.

Send today for complete information on Schrader Flow Control Valves. They'll help make air a more useful tool in your plant.

A. SCHRADER'S SON
Division of Scovill Manufacturing Company, Incorporated
459 Vanderbilt Avenue, Dept. E-41, Brooklyn 38, N. Y.

▲ For more details circle **NED-261 J4** on enclosed inquiry slip ▲

10 ways to get more for your money *in Dust and Fume Control*



Dustube® cloth-tube type collectors provide higher efficiencies at lower cost in practically every dust and fume control application for these 10 money-saving reasons:

1. Cloth tube filtration is nearly 100% efficient.
2. Simplicity of design cuts initial cost.
3. Low power consumption cuts operating costs.
4. Simple installation and inspection cuts maintenance costs.
5. Cloth filter tubes are quickly replaced.
6. All filter tube tension is eliminated.
7. Complete range of fabrics for high temperatures and corrosive applications.
8. Bridging and clogging prevented.
9. Shaking is fast, thorough and automatic.
10. No coarse dusts reach the tube.

Catalog 372 explains these important advantages. Send for a free copy today.

American WHEELABRATOR & EQUIPMENT CORP. | 508 S. Byrkit St., Mishawaka, Indiana

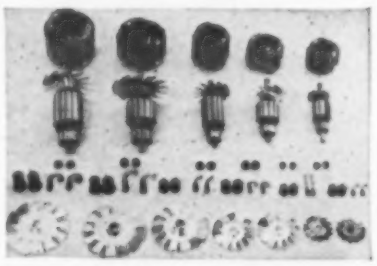
▲ For more details circle **NED-262 J4** on enclosed inquiry slip ▲

SPRACO NOZZLES

Write for NOZZLE CATALOG *to*
SPRAY ENGINEERING CO.
106 CENTRAL STREET • SOMERVILLE 45, MASS.

▲ For more details circle **NED-263 J4** on enclosed inquiry slip ▲

UNIVERSAL MOTOR PARTS sizes range from 1/10 to 1 hp

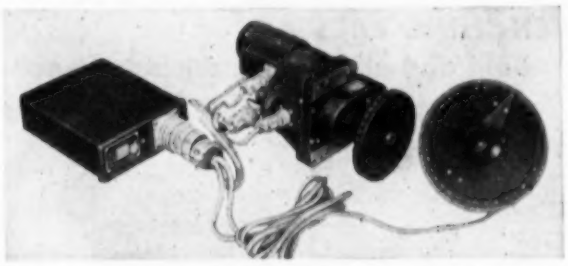


Standard universal motor parts are designed for built-in applications. Nominal ratings are from 1/10 to 1 hp (20 to 750 w output). Concentric ground field cores are completely assembled, taped, dipped and baked. Armatures are double-dipped in high grade insulation varnish, baked and dynamically balanced. Diamond-turned commutators consist of hard-drawn copper bars with mica insulation. Standard operating voltage is 120 v, but other voltages are available to order. Made by **Portable Electric Tools, Inc.,** Motor Div., 340 W. 83rd St., Chicago 20, Ill.

▲ For more details circle **NED-264 J4** on enclosed inquiry slip ▲

ELECTRIC SERVOMECHANISM for remote positioning applications

Consisting of electric amplifier, transmitter autosyn and magnetic powder clutch servo-drive with integral receiver autosyn, Electrolink servomechanisms is de-



signed for positive remote control. Power required is 115 v, single phase, 400 cycle; and 28-v dc. System weight is 10½ lb and all components meet USAF and Navy specifications for airborne use. Accuracy is within ¼ of 1 degree for most loads, with high frequency response retained over the complete output range. Maximum servo output is 150 lb-in. at 25 rpm without gear box. Other gear ratios and motor combinations are available to suit torque and speed to requirements. System provides positive no-creep adjustments with high response and accuracy. A 60-cycle version will be available. Made by **Lear, Inc.,** Dept. 80, 110 Iona Ave. N. W., Grand Rapids 2, Mich.

▲ For more details circle **NED-265 J4** on enclosed inquiry slip ▲

Skip Hoists

C. O. Bartlett & Snow Co.—16-page illustrated bulletin 110 details skip hoists for handling bulk materials of all kinds. It shows sequence views of operation of weigh type and plug feed loading gates. Capacities of various size buckets, speeds, descriptions of components and pictures of applications are included.

▲ For more details circle **NED-266 J4** on enclosed inquiry slip ▲

Stop Slamming Doors!

KANT-SLAM HYDRAULIC **Door Check**

Closes Stops Large or Small Doors, Screen Doors and Gates Easily, Gently, Smoothly Slamming . . . Banging . . . Broken Door Glass . . . Insects . . . Drafts . . . Heat Loss

$9.95 ATTRACTIVE, DARK BRONZE, METALLIC LACQUER FINISH—HAMMERED BRONZE EFFECT

KANT-SLAM closes doors with efficiency of human hand. Hydraulic action—NOT an air check—piston works in oil. 3 years trouble-free service guaranteed. Price about half of other hydraulic controls.

Works any place along hinge side of door—top, middle or bottom—either right or left hand doors. KANT-SLAM is completely self-contained—door and hinges are absolutely free of any strain or pressure. Holds door open when past 90 degrees.

Only one size Check required—three sizes easily detachable springs available for various size doors. Simple screw adjustment for closing speed.

Order on 30 Days FREE TRIAL at $9.95 delivered—or Write for Complete Details.

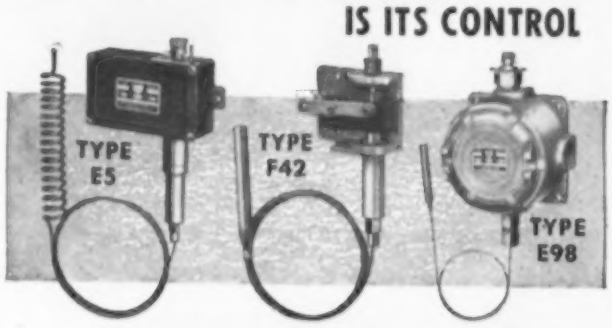
Used By Hundreds of Nationally-Known Firms

Oak Ridge Atomic Energy Plant, University of North Carolina, Great A. & P. Tea Co., Bethlehem Steel Co., General Electric Co., Rutgers University, Northern Aircraft, Fuller Brush Co., Carnation Co., Shell Oil Co., Kraft Foods.

KANT-SLAM DOOR CHECK CO.
374 W. Spring St., Bloomfield, Indiana

▲ For more details circle **NED-267 J4** on enclosed inquiry slip ▲

THE HEART OF YOUR PRODUCT IS ITS CONTROL



. . . SPECIFY *UNITED ELECTRIC*

These UE thermostats are precision-built temperature controls of the sensitive remote bulb type. All of them are available with a wide variety of thermal assemblies and switches for use between temperature limits of −150° and +600°F.

Type E98 is an explosion-proof control that is principally used in hazardous locations where explosive vapors or gases are present. Write for Bulletin #3-5.

Type E5 is used with ovens, water baths, incubators, hot-plate presses, cooling cabinets, air-conditioning equipment, food and drink vending machines, etc. Write for Bulletin #3-2.

Type F42 is similar to Type E5 but has an open head. Write for Bulletin #3-3.

UNITED ELECTRIC CONTROLS COMPANY
81 School Street, Watertown, Mass.

STANDARD & SPECIAL THERMOSTATS & PRESSURE SWITCHES

▲ For more details circle **NED-268 J4** on enclosed inquiry slip ▲

BEST ON ALL COUNTS

Capacity 2,000 lbs.

RAYMOND *Lightweight*
Hydraulic **HAND PALLET TRUCK**

- **LIGHTEST WEIGHT** Aluminum alloys reduce weight without sacrificing quality or strength.
- **STRONGEST FORKS** One-piece welded steel construction insures the maximum in overload safety factor.
- **EASIEST TO OPERATE** Foot pedals lift, lower loads. Easy to pull. Effortless pallet entry. (Patented booster roll construction.)
- **LONGEST SERVICE** Proven under years of use—and abuse. Lowest cost in the long run.
- **MOST EFFICIENT PUMP** Backed by over 25 years experience in manufacturing hydraulic material handling equipment.
- **RUGGED CONSTRUCTION** Ram pistons, axles, lever shafts are heat-treated alloy steel. Reinforced handle.

Mail Coupon!

The RAYMOND CORPORATION
4143 Madison St., Greene, N.Y.

Give me the facts on your Lightweight Hand Pallet Truck . . . send latest bulletin!

NAME _____ TITLE _____
COMPANY _____
STREET _____
CITY _____ STATE _____

▲ For more details circle **NED-269 J4** on enclosed inquiry slip ▲

HERE'S THE SURE WAY to stop packages containing stray metal from reaching your customers . . . Allis-Chalmers Electronic Metal Detectors!

Installed at raw material, processing, or packaging stages, these units detect stray metal — magnetic or nonmagnetic — no matter how deeply embedded.

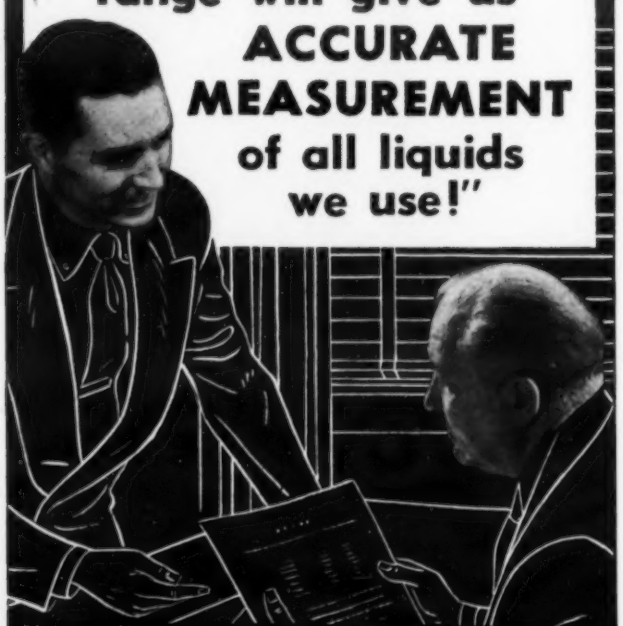
Units fit production setups. Conveyor belts from packaging machines can carry packages through detector aperture at 15 to 600 fpm. Maintenance and operating costs are small.

Get complete information! Call your nearby Allis-Chalmers office, or write Allis-Chalmers, Milwaukee 1, Wisconsin. A-4371

ALLIS-CHALMERS

For more details circle NED-270 J4 on enclosed inquiry slip

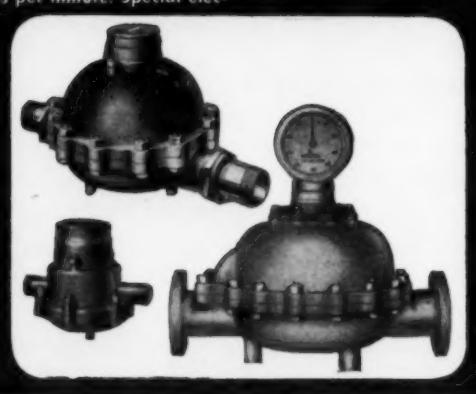
"I suggest NIAGARA METERS. Their wide range will give us ACCURATE MEASUREMENT of all liquids we use!"



The excellent accuracy of NIAGARA METERS minimizes waste and losses in the measurement of chemicals, solvents, oils, hot water, cold water, syrups and other liquids. Nearly all volumes and types are handled, from 1/30 to 1000 gallons per minute. Special electric contact meters for automatic batch metering. Stainless steel meters for corrosive liquids.

Be sure you know all the advantages of NIAGARA METERS.

Send in the Data Request blank below — today.



BUFFALO METER CO. 2903 MAIN STREET BUFFALO, N.Y.

Gentlemen:

Please send me complete information on the use of economical NIAGARA METERS, based on the data below:

Liquid _____ Pressure _____ p.s.i.
Temp. _____ °F.
Flow rate _____ g.p.m.
Maximum batch _____ gals.
Name _____ Title _____
Company _____
Address _____

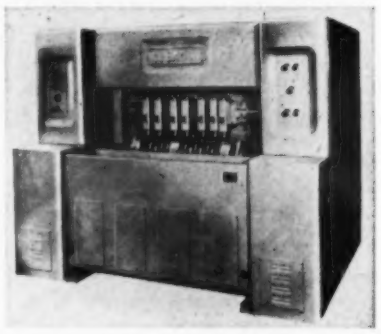
For more details circle NED-271 J4 on enclosed inquiry slip

INDUSTRIAL FANS
handle volumes up to 130,000 cfm

Sixteen models make up XL line of industrial fans, ranging in diameter from 11 to 60 in. and in capacity up to 130,000 cfm. Smaller sizes are available with three types of wheels suitable for handling media ranging from air to fibrous materials. Water-jacketed bearing option permits operation at temperatures up to 1000° F. Special construction is also available to adapt fans to handling corrosive or explosive gases or heavy materials. They provide universal discharge. Larger models have reinforced sheet steel housings and are available with any standard discharge. Design provides for interchangeable rim or backplate type wheels. Made by **Clarage Fan Co.**, Dept. N, Kalamazoo, Mich.

For more details circle NED-272 J4 on enclosed inquiry slip

QUENCHING PRESSES
hold and align parts during quench for minimum distortion in hardening



Controlled quenching of round, flat, shafted, or irregular parts is provided by series of quenching presses designed to hold and align parts for hardening with minimum of distortion. Cycle is automatic and preset by operator. Quenching oil is forced uniformly around heated part at a rate controlled at all stages so that a rapid initial quench, a slow second quench and a final rapid cooling quench can be obtained.

Presses have built-in pumping systems and oil reservoir and can be arranged to use water, caustic soda or another quenching media. Units for flat, round and irregular parts are in three sizes to accommodate parts with up to 36-in. maximum dimension. Machines for shafts or similar parts roll the part under preset pressure during cycle for minimum distortion. These units will handle parts with 9/16 to 4-in. diameters and from 6 to 43-in. long. Parts with gears, cams or shoulders up to 8-in. diameter can be handled. Made by **Gleason Works**, 1006 University Ave., Rochester 3, N. Y.

For more details circle NED-273 J4 on enclosed inquiry slip

HOW TO SAVE MONEY ON STEEL SHELVING

The real cost of shelving is the erected cost

That's why highest quality DeLuxe shelving costs you less. DeLuxe precision shelving has *fewer parts*, uses *80% less bolts* and is the *only shelving* available that is *100% adjustable*. It's quicker, less costly to install—easier to adjust.

Wherever you are, a DeLuxe factory representative is available to give you a complete engineering, planning and layout service without obligation.

Write for a free catalog now, while your mind is on shelving.

DELUXE METAL FURNITURE CO.
305 Struthers St., Warren, Pa.

DeLuxe

For over 25 Years Manufacturers of.
Storage Shelving • Library Shelving • Storage Cabinets • Shop Equipment

For more details circle NED-274 J4 on enclosed inquiry slip

PROVEN IN SHOPS OF EVERY SIZE

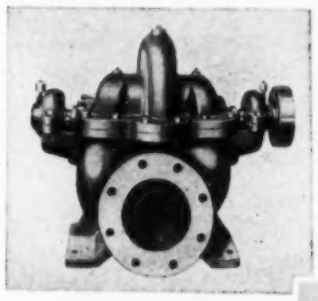
See our catalog and engineering sheets illustrating unlimited variety of turning, facing, boring, grinding and Bullard operations performed quickly and accurately with this low cost tool. No complicated hydraulic or electronic controls. Requires no permanent lathe alterations. Uses simple, easily made templates. Models to fit lathes 9" to 24" and larger.

AIR CONTROL DIVISION OF
Lehigh Foundries, Inc.
1503 LEHIGH DRIVE, EASTON, PA.
Mfrs. of LEHIGH Air Valves, Air Cylinders, Air Hoists, Air Motors
West Coast Distributor: CAMPBELL CONTOUR ATTACHMENT CO.
1320 W. Esther Street, Long Beach, Cal.

For more details circle NED-275 J4 on enclosed inquiry slip

DE LAVAL

makes single and two-stage pumps for a wide range of applications



De Laval Single Stage Centrifugal Pumps are available in both single and double suction designs . . . offer many important design features. Sizes range up to 14" suction and 12" discharge. Write for Bulletin 1002.

De Laval Two-Stage Horizontal Pumps are designed for long, highly efficient service. Capacities range from 75 to 3,000 gpm, sizes from 2" to 8" discharge, heads to 750 feet. Write for Bulletin 1501.

DE LAVAL STEAM TURBINE COMPANY
808 Nottingham Way, Trenton 2, New Jersey

DL 281

For more details circle NED-276 J4 on enclosed inquiry slip

CUTS COSTS AT ANY ANGLE

'Tugit' is the handiest portable tool made for lifting and pulling loads at any angle. Small size, and spur-geared hoist efficiency make close-quarter operation a cinch. The powerful, automatic brake acts quickly and smoothly—no kicking handle! Spotting is accurate—loads can be moved as little as 3/32" at a time.

In placing machines, tightening guy wires, laying pipe or a-thousand-and-one other jobs—'Tugit' saves time and money. It's light, compact, fits any tool box. One and two-ton sizes available. Ask your "Shaw-Box" Distributor for details or send for Bulletin 388.

'TUGIT'® HOISTS

MANNING, MAXWELL & MOORE, INC.
MUSKEGON, MICHIGAN

Builders of "Shaw-Box" and 'Load Lifter' Cranes, 'Budgit' and 'Load Lifter' Hoists and other lifting specialties. Makers of 'Ashcroft' Gauges, 'Hancock' Valves, 'Consolidated' Safety and Relief Valves, 'American' Industrial Instruments, and Aircraft Products.

For more details circle NED-277 J4 on enclosed inquiry slip

Better Welding

Heat... up & down slope

Improved non-synchronous performance with Square D's NEW SLOPE CONTROL

BETTER AND MORE PROJECTION WELDS through more uniform distribution of welding current.

PERMITS WELDING NON-FERROUS METALS. Reduced "spitting" at electrodes improves appearance of aluminum and other non-ferrous welds—extends electrode life.

DESIGN FEATURES

Matched Enclosures. Slope Control enclosure matches Square D Non-Synchronous Welder Controller (Nema N2), shown at right. Also matches individual Square D welding timer or contactor enclosures.

Simplified Circuit, standard components, and heavy-duty construction.

Write for Bulletin 8990 EWG. Address Square D Company, 4041 North Richards Street, Milwaukee 12, Wisconsin.

SQUARE D COMPANY

▲ For more details circle NED-278 J4 on enclosed inquiry slip ▲

OIL YOU CAN SEE . . . IS WASTE YOU CAN STOP!

Stop waste WITH

HOUGHTON E. P. TREATED STA-PUT LUBRICANTS

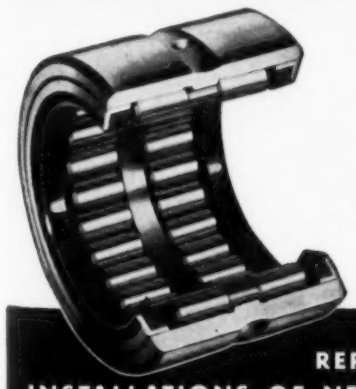
. . . LESS OIL . . . LESS OFTEN! Houghton Sta-Put Lubricants *stay put* where they're needed—cling tightly to metals—offer extraordinary adhesion. They give you film strength many times higher than that of ordinary lubricating oils. They keep your equipment running longer . . . with greater safety . . . on less! Write for data on "Sta-Put" Oils and Greases, to E. F. Houghton & Co., 303 W. Lehigh Ave., Philadelphia 33, Pa.

STA-PUT LUBRICANTS

. . . products of E. F. HOUGHTON & CO. PHILADELPHIA · CHICAGO · DETROIT · SAN FRANCISCO

Ready to give you on-the-job service . . .

▲ For more details circle NED-279 J4 on enclosed inquiry slip ▲



NEW McGILL® sealed GUIDEROL® full type roller bearing

REPLACES COSTLY INSTALLATIONS OF NEEDLE BEARINGS AND SEPARATE SEALS

Dependable GUIDEROL Bearings are now available in a new series that incorporates single or double seals without any increases in overall bearing width. It's the first sealed unit to replace ordinary needle bearings having auxiliary sealing arrangements. Housings can be less complicated and smaller with less machining.

Complete with commercial lip type seals, the new unit costs very little more than standard bearings for shaft sizes of ⅜" to 2 inches. Five seal combinations increase application possibilities for this first sealed full-type roller bearing.

Detailed information is contained in a new bulletin, SGR-54. Write for it today.

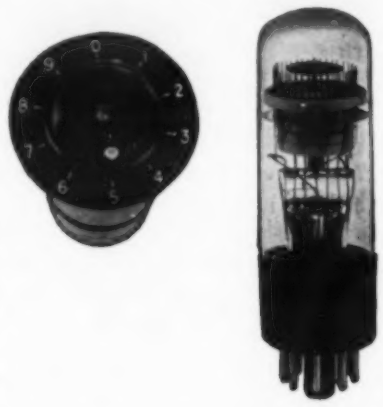
McGILL® precision bearings

McGILL MANUFACTURING CO., INC. 101 N. LAFAYETTE ST. VALPARAISO, INDIANA

▲ For more details circle NED-280 J4 on enclosed inquiry slip ▲

CATHODE COUNTING TUBE
capable of 20,000 counts per second

Maximum input frequency of 20,000 counts per second is featured by Dekatron model GC-10D cold cathode counting tube for use in fast electronic registers and counters. Count is determined by position of glow on any one of 10 radially spaced cathodes around an axially positioned anode. Tube can be mounted in any position. It measures 3.87 x 1.12 in. and has octal base with cathode number 0 brought out to an individual pin. Tube operates on 420 v dc and anode current is 800 microamps. It can be used in conjunction with slower counting stages employing the GC-10B tube. Resetting is by simple pushbutton. British-made tube is distributed by **Atomic Instrument Co.,** 86 Massachusetts Ave., Cambridge 39, Mass.



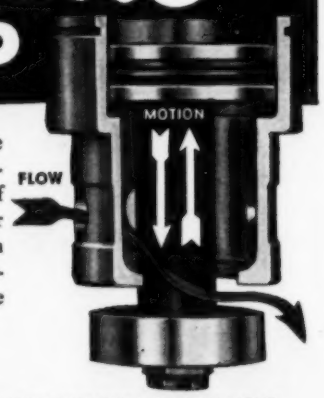
▲ For more details circle NED-281 J4 on enclosed inquiry slip ▲

WINDROW LOADER
capacity is 4 cu yd per minute

Medium capacity maneuverable model 550 windrow loader consists of loading belt, conveyor boom and mechanical feeding mechanism mounted on a rubber-tired model 50 John Deere tractor. Its capacity is 4 cu yd per minute, 7 cu yd with snow. Feed mechanism breaks up material to easy-to-handle size before pulling it onto cleated rubber 18-in. wide conveyor. Mechanism raises and lowers automatically to clear solid obstructions. Discharge height is 10 ft and overhang is 8 ft. Operator and tractor are protected from falling stones by wire guard. Boom can be lifted for transport by power operated hydraulic rams. Loader will make a complete turn in an 8 ft 6-in. radius and has travel speed of 10 mph. Made by **Barber-Greene Co.,** 405 N. Highland Ave., Aurora, Ill.

▲ For more details circle NED-282 J4 on enclosed inquiry slip ▲

NO SPRINGS NEEDED



This removable cartridge contains the "piston poppet,"...only moving part of a Hannifin "P-M" Master Valve. This piston-driven poppet is pressure operated both ways. There are *no springs to fail!*

WRITE FOR OUR COMPLETE NEW "P-M" VALVE CATALOG

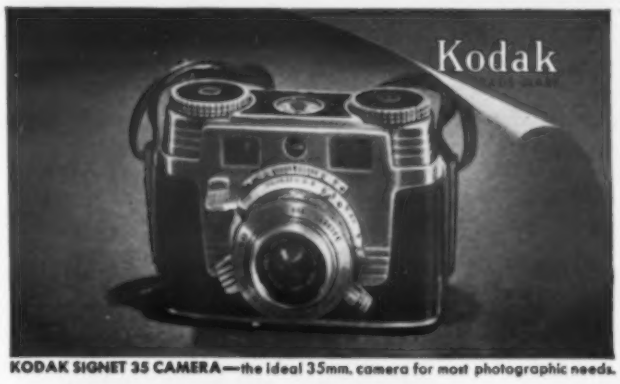
Find out how P-M Master Valves (pressure-operated) and Pilot-Master Valves (solenoid-controlled, pressure-operated) can all be serviced with a stock of just two sizes of these removable cartridges. 2-Way, 3-Way, 4-Way. Sizes: ⅜" to 1¼". Also, two complete series of ¼" direct-operated valves. Bulletin 232.

HANNIFIN

Hannifin Corporation, 527 Wolf Road, Des Plaines, Ill.

AIR AND HYDRAULIC CYLINDERS • PRESSES • AIR CONTROL VALVES

▲ For more details circle NED-283 J4 on enclosed inquiry slip ▲



KODAK SIGNET 35 CAMERA—the ideal 35mm. camera for most photographic needs.

Easy-to-use camera for hard-working pictures

You'll find it easier to train . . . to demonstrate . . . to illustrate technical talks . . . and do countless other important jobs with 35mm. slides and prints. Job setups, breakage claims, safety hazards, research results, maintenance data—all can be photographed for study, circulation, and reference. And with a camera small enough to slip into your pocket for use as you walk through the plant.

The Kodak Signet 35 Camera has all the advanced features you need for taking quality industrial photographs. Yet it's as compact and easy to operate as your family snapshot camera. A coupled rangefinder takes the guesswork out of focusing—three simple settings with handy finger-tip controls make accurate operation a snap. Sensibly priced at $87.50, including Fed. Tax.*

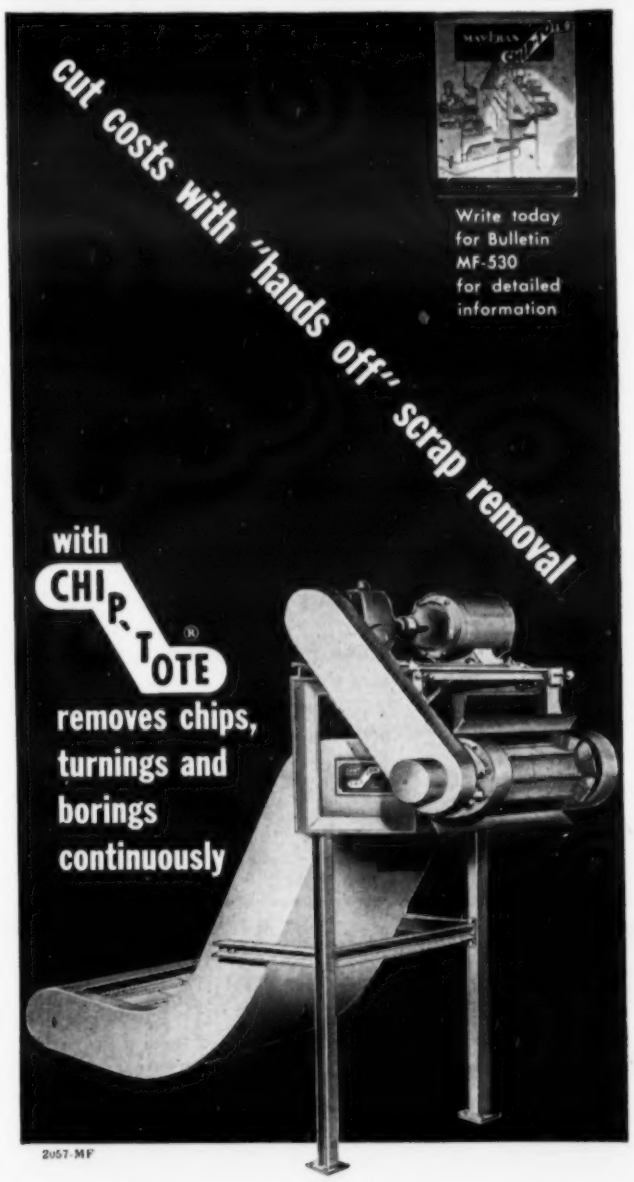
WRITE FOR FREE BOOKLET on Kodak Signet 35 Camera.

EASTMAN KODAK COMPANY
Rochester 4, N. Y.

**Price quoted is subject to change without notice.*

▲ For more details circle NED-284 J4 on enclosed inquiry slip ▲

cut costs with "hands off" scrap removal



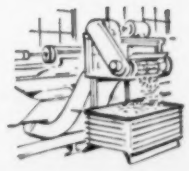
Write today for Bulletin MF-530 for detailed information

with CHIP-TOTE® removes chips, turnings and borings continuously

2u57-MF

Cut production costs by eliminating downtime for manual scrap removal!

While machines are in continuous operation, the MAY-FRAN CHIP-TOTE automatic scrap conveyor removes borings, turnings and chips from your high production machine tools. Design features permit a wide range of sizes to fit all standard multiple spindle or automatic machine tools.



To slash production costs, specify . . . MAY-FRAN CHIP-TOTE automatic scrap conveyors.

DESIGNERS AND ENGINEERS OF COMPLETE SCRAP HANDLING SYSTEMS

MAY-FRAN ENGINEERING, INC.

1711 CLARKSTONE ROAD • CLEVELAND 12, OHIO

▲ For more details circle NED-285 J4 on enclosed inquiry slip ▲

your guide to the world's largest stocks of ELECTRONIC SUPPLIES FOR INDUSTRY

Simplify and speed *all* your purchasing of electronic supplies and equipment. Send your orders to us for fast shipment from the world's largest stocks of electron tubes (all types), test instruments, audio equipment, electronic parts (transformers, capacitors, controls, etc.). Our expert Industrial supply service saves you time, effort and money. Send today for your FREE 1955 ALLIED Catalog—the *complete* up-to-date guide to the world's largest stocks of quality Electronic supplies for Industrial use.

One complete dependable source for everything in electronics

ALLIED RADIO
100 N. Western Ave., Dept. 37-J-4
Chicago 80, Illinois

For more details circle NED-286 J4 on enclosed inquiry slip

...you can read any surface temperature in your plant...accurately and easily...with the Alnor Portable Pyrocon.

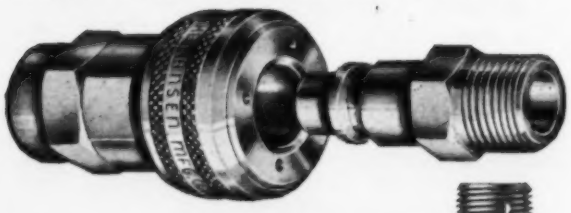
Compact in size, complete in precision design and workmanship, this rugged instrument assures the highest standards of speed, accuracy and dependability. You can take temperature readings on materials in process, the finished product or the heated equipment itself—in as few as 3 seconds!

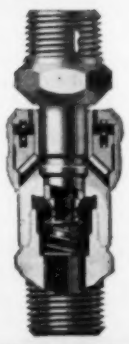
Alnor Portable Pyrocons come in scale ranges to 2000° F., with thermocouples for every application. You'll find full details on the Pyrocon exactly suited to your operations in Bulletin 4257. Send for your copy now. Write: Illinois Testing Laboratories, Inc., Room 529, 420 N. LaSalle St., Chicago 10, Ill.

Alnor PRECISION INSTRUMENTS FOR EVERY INDUSTRY

For more details circle NED-287 J4 on enclosed inquiry slip

HANSEN
QUICK-CONNECTIVE
PUSH-TITE COUPLING
TRADE MARK
Provides Instant Automatic Flow or Shut-Off





To connect a Hansen Push-Tite Coupling, you merely push the Plug into the Socket with one hand. Flow is instantaneous.

To disconnect, push back sleeve on Socket... Coupling disconnects and flow is shut off instantly and automatically. No tools required. When Coupling is connected, Plug is free-swiveling, thus eliminating any possibility of kinks in hose.

Two-way shut-off and straight-through Couplings also available.
WRITE FOR CATALOG

THE HANSEN MANUFACTURING COMPANY
4031 WEST 150th STREET • CLEVELAND 11, OHIO

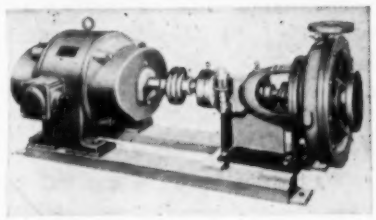
For more details circle NED-288 J4 on enclosed inquiry slip

AUTOMATIC MARKING TOOL for multispindle screw machines

Cut-off tool and marking die are combined in model 700 automatic marker for multispindle screw machines. Relative positions of marking die and cut-off tool are such that characters are imprinted on the work first as the cut-off tool advances. Die is carried clear of the part after marking and cut-off tool completes the job. Optional die-head opening bar is available for use during production of threaded parts. Unit requires little set-up time and in effect adds an additional slide to the machine. Made by **New Method Steel Stamps, Inc.**, 147 Jos. Campau St., Detroit 7, Mich.

For more details circle NED-289 J4 on enclosed inquiry slip

CENTRIFUGAL PUMPS standard components can be changed to meet any operating requirements



Series of production-built centrifugal pumps features interchangeable and different designs of packings, shafts and impellers in a wide choice of corrosion and erosion-resistant materials. Various lubrication methods can be used. Pumps can thus be ordered to meet almost any requirement. They are also easily adapted in the field to changed conditions. They are available with capacities ranging from fractional flow to 600 gpm with light, medium or heavy-duty components. Different pedestals provide a choice of center line heights to accommodate various NEMA motors.

Accent on corrosion resistance is carried through even to mounting members, so that pumps can be used in destructive atmospheres. Typical products which line can be engineered to handle include alcohols, acetone, acids, brine, toluene and vegetable oils. Made by **Ampco Metal, Inc.**, Dept. 9-54, 1745 S. 38th St., Milwaukee 46, Wis.

For more details circle NED-290 J4 on enclosed inquiry slip

Automatic Controls

Seely Instrument Co.—Aeromac automatic controls described in this folder can be adapted to manually controlled hydraulic compression presses, batch process machinery or used where cyclical operation is required. Covered are timers, temperature and pressure controls and air diaphragm valves. They can be arranged in any combination for full or semiautomatic operation of present machinery.

For more details circle NED-291 J4 on enclosed inquiry slip

LOW-COST VENTILATION
with this versatile "package" fan!

Light-weight
Adjustable Capacity
Non-overloading

"Buffalo" BELTED VENT SET

If you need 500 to 20,000 cfm of quiet ventilation in an easily installed indoor-or-outdoor fan, the Belted Vent Set is your answer! It's lightweight and compact—requires no expensive foundation. It's efficient and very simple to maintain—and cannot be overloaded regardless of duct length. Special protective coatings and metals can be provided for corrosive industrial applications. Ventilate your plant, warehouse or offices with these versatile, practical fans and enjoy years and years of economical service. Write for Bulletin 3720A for all details!

BUFFALO FORGE COMPANY
215 MORTIMER ST. BUFFALO, NEW YORK
PUBLISHERS OF "FAN ENGINEERING" HANDBOOK
Canadian Blower & Forge Co., Ltd., Kitchener, Ont.
Sales Representatives in all Principal Cities

For more details circle NED-292 J4 on enclosed inquiry slip

How cost-wise buyers rate STANDARD STOCK GEARS

IN STOCK AT 92 BOSTON GEAR DISTRIBUTORS at Factory Prices

Look under "Gears" in the Yellow Classified Section of your Telephone Directory for the one nearest you.

Get the 384-page BOSTON Gear Catalog... Industry's most valued "textbook" of drive design and maintenance. Ask your BOSTON Gear Distributor, or write Boston Gear Works, 69 Hayward St., Quincy 71, Mass.

For more details circle NED-293 J4 on enclosed inquiry slip

here's help ON YOUR MATERIAL HANDLING PROBLEMS

Paper
Fertilizer
Feed
Gravel
Municipality
Brewery
Metal Working
Coal
Ceramics
County
Railroads
Highways
Foundry

"PAYLOADER" tractor-shovels have solved earth and bulk-material handling problems for thousands of industries. The Job Studies shown are authorized, detailed studies of "PAYLOADER" performance and results for specific owners. Any of these studies are available on request, without obligation.

"PAYLOADERS" are available in several sizes and models for indoor and outdoor use and are sold and serviced by a world-wide Distributor organization. The Frank G. Hough Co., 746 Sunnyside Ave., Libertyville, Illinois.

YOU CAN'T COMPETE IF YOUR EQUIPMENT IS OBSOLETE!

PAYLOADER
THE FRANK G. HOUGH CO. • Since 1920

For more details circle NED-294 J4 on enclosed inquiry slip

cut weld cleaning time by 85%

Throw away your cold chisel and whisk off weld spatter with a dry rag! Protect-O-Metal spatter-proofing compounds make weld cleaning a breeze. Improve your welds at the same time - - P-O-M compounds quiet the arc, improve fusion and electrode operation, prevent oxidation and annealing scale, cause no porosity. No smoke, odors, or fumes.

P-O-M No. 2. Non-inflammable, non-toxic, water-soluble paste. Inorganic. Thin before applying and start welding at once. $3.25 per gallon, f.o.b. Dayton.

P-O-M No. 8. Rust- and corrosion-resistant resin base compound. Comes ready to use. Safe for all metals. Good paint primer; permits outdoor storage of subassemblies. $3.30 per gallon, f.o.b. Dayton.

MONEY-BACK TRIAL OFFER

Order a trial gallon of each today for testing in your shop. We'll cancel the bill if you're not satisfied.

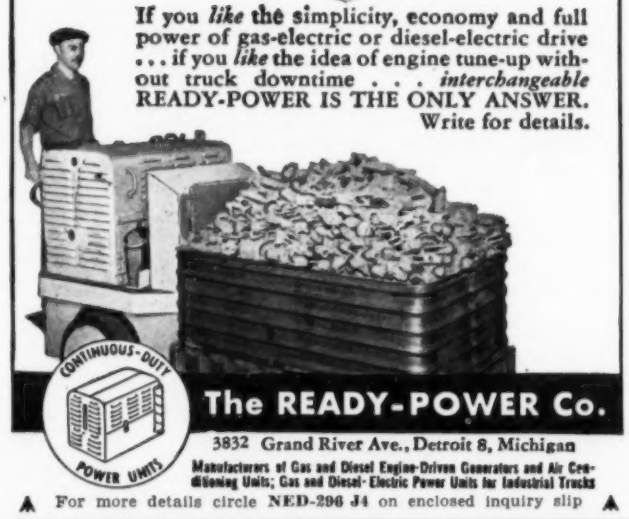
PROTECT-O-METAL

G. W. SMITH & SONS, INC. 5406 KEMP ROAD, DAYTON, O.

For more details circle NED-295 J4 on enclosed inquiry slip

Removable Ready-Power Units give you off-the-truck maintenance

Keep trucks *on the job!*



If you *like* the simplicity, economy and full power of gas-electric or diesel-electric drive . . . if you *like* the idea of engine tune-up without truck downtime . . . *interchangeable* READY-POWER IS THE ONLY ANSWER. Write for details.

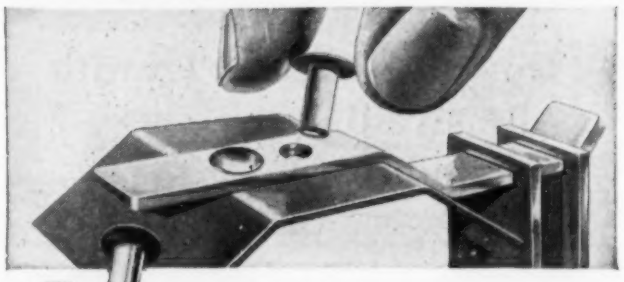
CONTINUOUS-DUTY POWER UNITS

The READY-POWER Co.

3832 Grand River Ave., Detroit 8, Michigan

Manufacturers of Gas and Diesel Engine-Driven Generators and Air Conditioning Units; Gas and Diesel-Electric Power Units for Industrial Trucks

For more details circle NED-296 J4 on enclosed inquiry slip



You Enjoy The Economy Of Quality With Townsend Tubular Rivets

Townsend tubular rivets have the uniform physical properties and accurate dimensions you need for efficient assembly. They are made of wire of the proper grade and analysis, drawn to specifications in our own wire mill. This assures positive control of quality giving you uniform ductility for ease of setting.

Townsend tubular rivets feed readily into any make automatic machine—may also be set easily by hand. Their appearance is good—adds to the attractiveness of your product. They weigh less than many other types of fasteners—reduce product weight.

These quality rivets are available in a wide range of sizes in steel, brass, aluminum and copper. To enjoy the economy of quality, specify Townsend tubular rivets for your assembly operations.

Townsend Company

NEW BRIGHTON, PENNSYLVANIA

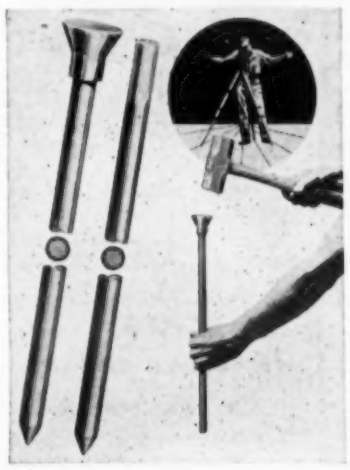
For more details circle NED-297 J4 on enclosed inquiry slip

DRUM FILLER for 30 and 55-gallon drums

For use with free-flowing liquids, Diafram Filler drum filling machine will fill 30 or 55-gallon drums at rates up to 60 per hour. Accurate semi-automatic machine is available in hand or air-controlled styles. Liquid to be dispensed is forced first to one-side and then to the other of a diaphragm which divides the two halves of the machine's body. Fluid thus forced into one side causes that already in the other to be dispensed into the container or drum. Discharge from both sides is identical. Machine is capable of handling corrosive liquids. Made by **Drum Equipment Corp.**, 945 Lehigh Ave., Union, N. J.

For more details circle NED-298 J4 on enclosed inquiry slip

SURVEY MARKERS made from copper-covered steel



Permanent location of survey points is afforded by these survey markers. They consist of steel core to which is welded a corrosion-resistant copper covering. Core gives strength required for driving. Tinned-end and bronze-head types are available. Former is for use in uneven or foliaged ground and is easily seen. Latter can be driven flush with pavements or other surfaces and has ample space on head for center-punching exact reference points and other data. Tinned end marker is available in ½ or ⅝-in. diameters, bronze head type in ⅝-in. diameter. Standard length for both types is 3 ft. Made by **Copperweld Steel Co.**, Wire & Cable Div., Monongahela St., Glassport, Pa.

For more details circle NED-299 J4 on enclosed inquiry slip

Rotary & Surface Grinders

Standard Electrical Tool Co.—Line of automatic precision rotary and surface grinding machines, including the Rotamatic, Planematic, Grindmatic and Profilematic, are described in 12-page illustrated catalog AG. Solutions to actual grinding problems are illustrated, showing specific applications for each model.

For more details circle NED-300 J4 on enclosed inquiry slip

UNITABLE® BELT CONVEYOR

For Assembly - Inspection - Packaging

The most ADAPTABLE portable conveyor you can find. Exclusive "unitized" design 10' to 80' lengths. Write for UNITABLE Bulletin now.

CONVEYOR SPECIALTY COMPANY INC.

37 Newport Avenue

North Quincy 71, Mass.

For more details circle NED-301 J4 on enclosed inquiry slip

When heavy, unwieldy weldments like these diesel crank cases can be quickly swung into any position so that every weld is made downhand—that's efficient welding.

Welders spend more time welding—do better welding at lower cost when they work with C-F Positioners because these hand and/or power operated machines reduce positioning time to a minimum. Investigate the cost saving advantages of C-F Positioners. They pay their way in any company.

Write for Bulletin WP 26—an illustrated circular detailing the Specific Advantages of C-F Positioners.

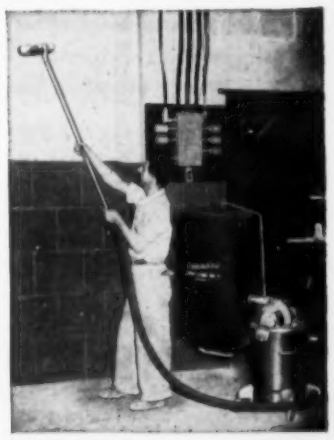
CULLEN-FRIESTEDT CO.

1304 S. Kilbourn Chicago 23, Ill.

For more details circle NED-302 J4 on enclosed inquiry slip

TORNADO® TAKES A HAND in Plant Health and Safety

The Willette Corporation, New Brunswick, New Jersey, uses Tornado 92 to protect their employees from dust.



Manufacturers of ceramic bathroom accessories, Willette has a problem with the clay dust that accumulates on floors and ceilings. Sweeping with brooms only stirred up the dust.

Then Tornado took over! Their powerful Model 92 with suction velocity of 320 m.p.h. instantly removed this dust . . . collecting it for easy disposal.

If yours is an industrial cleaning problem, you will find that Tornado Cleaning boosts employee morale, improves safety and speeds up production.

Take advantage of the Tornado free offer to demonstrate right in your plant at no obligation. Just tell us time and place.

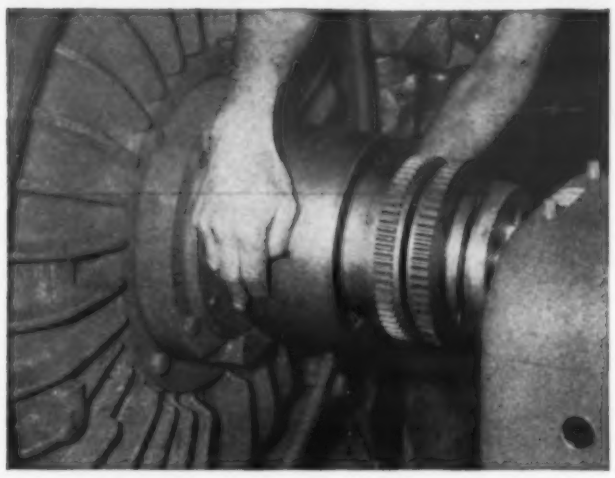
WRITE FOR BULLETIN 600 TODAY

BREUER ELECTRIC MFG. CO.

5116 North Ravenswood Avenue • Chicago 40, Illinois

For more details circle NED-303 J4 on enclosed inquiry slip

UNCOUPLED - *in seconds!*

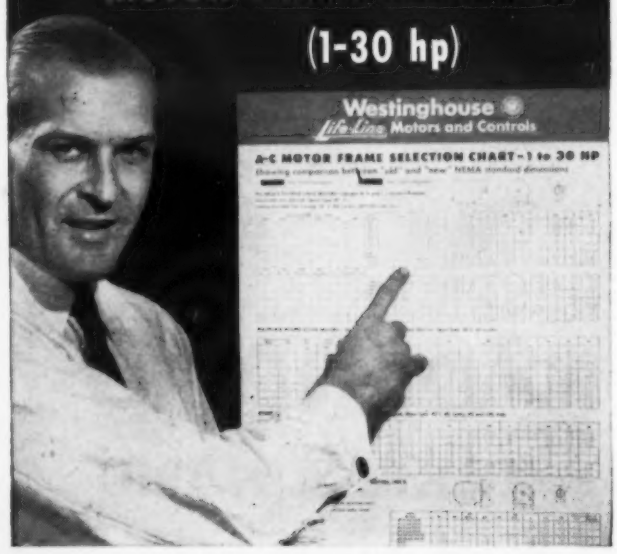


Slash down-time . . . assembly, operating, maintenance costs. Simplified 7-part flexible gear couplings have no nuts, bolts, flanges—are assembled, uncoupled in seconds without special tools. You install, move, align, clean, maintain equipment in a *fraction* of the time. Largest bore, HP and RPM capacity . . . you buy smaller, less expensive couplings that cut costs, increase life of equipment. See your Sier-Bath Coupling Distributor . . . send for 16-page CATALOG. *Sier-Bath Gear & Pump Co., Inc., 9240 Hudson Blvd., North Bergen, N. J.*

Flexible
Sier-Bath GEAR COUPLINGS
Founded 1905 *Also mfrs. of Precision Gears, Rotary Pumps* Member A.G.M.A.

▲ For more details circle **NED-304 J4** on enclosed inquiry slip ▲

Free **NEW GUIDE TO A-C MOTOR FRAME SELECTION (1-30 hp)**



This WALL CHART saves time in comparing old and new NEMA frame dimensions for . . .

- general-purpose a-c motors
- wound-rotor motors
- single-phase motors
- a-c flange-mounted motors

Here's a quick and ready reference to the new NEMA frame number for each type of a-c motor application (1-30 hp). Start with the rpm and horsepower requirements for a motor, then simply follow across this wall chart to locate the correct, new NEMA frame number and all its basic frame dimensions.

In addition, directly above this information are given the standard dimensions for the corresponding old NEMA frame number. Thus, you have a complete selection guide and comparison table in convenient, durable, chart form ready for wall hanging.

J-21783

YOU CAN BE **SURE**... IF IT'S **Westinghouse**

Westinghouse Electric Corporation
3 Gateway Center, P. O. Box 868
Pittsburgh 30, Pennsylvania

Please send me copies of the Westinghouse A-C Motor Frame Selection Wall Chart—DC 463

Name_____

Firm_____

Address_____

City_____ State_____

▲ For more details circle **NED-305 J4** on enclosed inquiry slip ▲

SPHERICAL BEARING design permits heavy loading

Spherical bearing can be constructed in wide range of materials and has selective and close-tolerance fit between race and ball. Large bearing area allows heavy radial and axial loads, and assemblies are suitable for use in high temperature applications. Mounting jet engines in aircraft is one application. Bearing is available in many configurations including rod ends, and in sizes up to No. 16. Other sizes can be produced as required. Made by **Delron Co.,** Bearing Div., 5226 Southern Ave., South Gate, Calif.

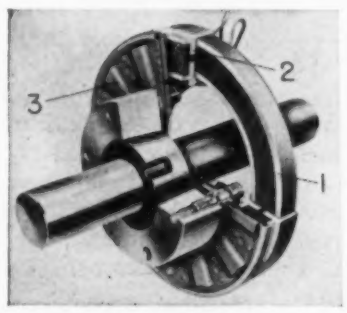
▲ For more details circle **NED-306 J4** on enclosed inquiry slip ▲

COMPACT VALVES fully opened in less than 1½ turns

New line of compact pattern valves which includes boiler drains, sillcocks, oil tank valves angle stop and stop-and-waste types provides quick - opening feature. Valves are fully opened in less than 1½ turns. Neoprene disk insures positive shutoff and long life. Made by **Northern Indiana Brass Co.,** Ross & Martin Sts., Elkhart, Ind.

▲ For more details circle **NED-307 J4** on enclosed inquiry slip ▲

ELECTRIC BRAKES & CLUTCHES 8 lb-in. to 700 lb-ft torque range

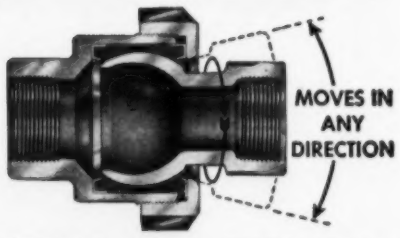


Line of electric brakes and clutches for synchronizing machine motion, controlling indexing and positioning, interlocking or simplifying automation includes units in torque range of 8 lb-in. to 700 lb-ft. Compact brake is comprised of field armature and replaceable facing. Wear adjustment is automatic. Companion electric clutch operates on stationary field principle in which current is induced into rotating coil. Both brake and clutch can be controlled by pushbutton, operator or automatically controlled by electric switches, relays or electric eyes. Made by **Warner Electric Brake & Clutch Co.,** Dept. N, Beloit, Wis.

▲ For more details circle **NED-308 J4** on enclosed inquiry slip ▲

BARCO *Flexible* **BALL JOINTS**

—when you need movable joints in piping handling



STEAM, OIL, CHEMICALS

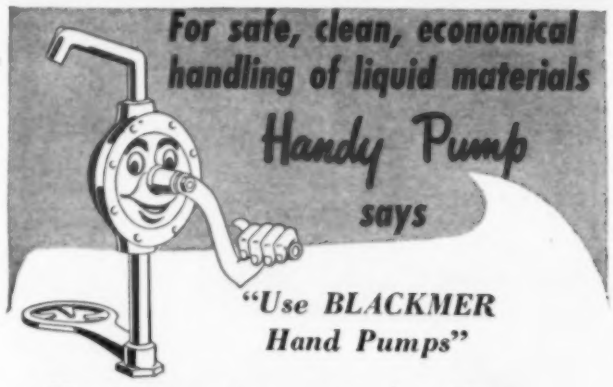
Send for New Bulletin No. 215

- Provides for movement in piping—up to 40° side flexibility, plus 360° rotating movement.
- Stainless steel and chemically inert gaskets for strong chemicals. No metal-to-metal contact. Choice of body materials.
- One Barco Ball Joint does the work of two or more ordinary swivel joints because "it moves in any direction!"
- Many models available. For pressures to 7,500 psi; temperatures to 1000° F. 15 different sizes. ¼" to 12". *Ask for recommendations.* BARCO MFG. CO., 530K Hough St., Barrington, Illinois.

THE ONLY TRULY COMPLETE LINE OF FLEXIBLE BALL, SWIVEL, SWING AND REVOLVING JOINTS

▲ For more details circle **NED-309 J4** on enclosed inquiry slip ▲

For safe, clean, economical handling of liquid materials



Check these features!

- Easy rotary pumping action.
- Surplus liquid return eliminates spillage and waste.
- Positive displacement for positive control.
- Wide range of "plant engineered" accessories.
- Available in capacities from 7 to 28 gallons per minute.

Call your local representative or write the factory for information.

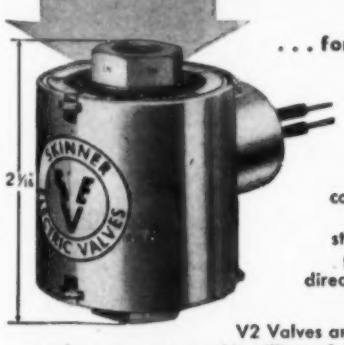
liquid materials handling
BLACKMER

Industrial, Hand and Truck Pumps, Strainers, Pressure Control Valves
BLACKMER PUMP COMPANY, GRAND RAPIDS 9, MICH.
DIVISION SALES OFFICES — NEW YORK • ATLANTA • CHICAGO
GRAND RAPIDS • DALLAS • WASHINGTON • SAN FRANCISCO
See Yellow pages for your local sales representative

▲ For more details circle **NED-310 J4** on enclosed inquiry slip ▲

SKINNER
V2 STAINLESS STEEL SOLENOID TWO-WAY CUT-OFF VALVES

. . . for Air, Water, Inert Gases, Oils & Other Media



Miniature Skinner V2 Stainless Steel Valves are competitively priced, yet skillfully engineered to highest quality standards. Stainless steel internal parts, leakproof operation, and direct mounting make them ideal for a wide range of applications.

V2 Valves are small (weigh 9 ozs.), yet give performance measured in millions of cycles. They feature "fail-proof", bubble-tight shut-off: pressure and spring combine to snap valves to normal position at the instant current goes off.

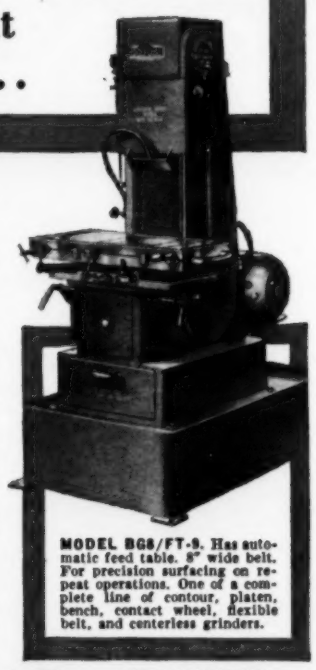
SPECIFICATIONS: Type: Two-Way, Normally Open or Normally Closed; Pressure Range: 0-250 PSI; Orifice Diameter: 3/64" to ⅛"; Pipe Size: ⅛" or ¼" NPT; Voltage: All common AC, DC voltages. *Write for Bulletin 534.*

Skinner **ELECTRIC VALVE DIV.**
THE SKINNER CHUCK COMPANY

112 Edgewood Ave., New Britain, Conn.

▲ For more details circle **NED-311 J4** on enclosed inquiry slip ▲

How to CUT COSTS with Abrasive Belt Grinding . . .



Abrasive Belt Grinding does many milling, shaping, polishing and grinding jobs 30% *to* 80% *faster* than presently-used machines. Simplifies fixtures—often eliminates them entirely. Frequently saves 75% to 90% of former set-up time.

Let us prove that an Abrasive Belt Grinder can cut your machining costs. Send us sample pieces for recommendations—or ask to have one of our production engineers call to discuss your problems at your plant. Free 32-page case history booklet on request.

MODEL BG8/FT-9. Has automatic feed table. 8" wide belt. For precision surfacing on repeat operations. One of a complete line of contour, platen, bench, contact wheel, flexible belt, and centerless grinders.

ENGELBERG

THE ENGELBERG HULLER CO., INC.
169 Seneca St.
Syracuse, N. Y.

▲ For more details circle **NED-312 J4** on enclosed inquiry slip ▲

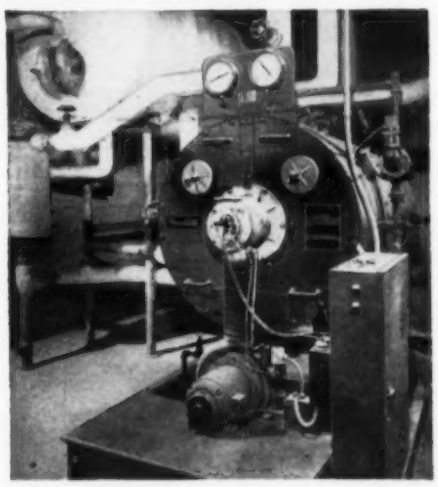
Both Tips Were Soaked in Solder 364 Hours

DESPITE THIS PUNISHING TEST, the G-E Ironclad tip looks new! It still has long life expectancy. Ironclad copper tips *last up to ten times as long* as plain copper tips—save you maintenance and replacement costs. Use the tip that combines the heat transferring qualities of copper with the durability of iron, G-E Ironclad copper tips. Write to Section 720-136, Schenectady 5, N. Y., for free bulletin GEA-4519, Industrial Soldering Irons.

GENERAL ELECTRIC

▲ For more details circle **NED-313 J4** on enclosed inquiry slip ▲

Steam Costs Go DOWN where *Powermasters* Go In



For Example:

This oil-fired *Powermaster* Packaged Automatic Boiler heats the entire multi-building area of the Davison Chemical Corporation's new fertilizer plant at New Albany, Indiana. High fuel economy at all loads, cost-saving installation, space-saving compactness, hospital-clean operation, dependable performance, maintenance-saving accessibility, fully automatic operating and safety controls and smokeless combustion make *Powermaster* a wise boiler investment for any type of plant or building.

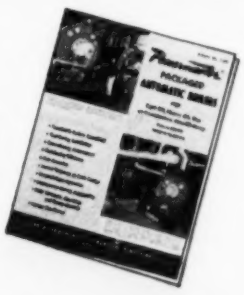
Have You Checked Your Steam Costs Lately?

Many kinds of industrial plants, food processors, schools, institutions, public buildings, laundries, housing projects and utilities are enjoying the cost-saving advantages of *Powermaster* boilers.

New Bulletin Will Convince You

...that *Powermaster's* many cost-saving advantages make it your best boiler buy.

SEND NOW FOR BULLETIN



O&S *Powermaster*®

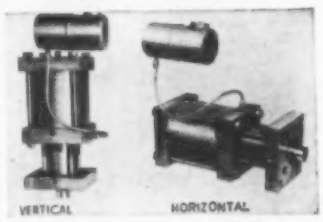
PACKAGED AUTOMATIC BOILERS

Sizes to 500 HP; pressures to 250 psi.

Orr & Sembower, Inc.
Morgantown Road, Reading, Pa.

▲ For more details circle **NED-314 J4** on enclosed inquiry slip ▲

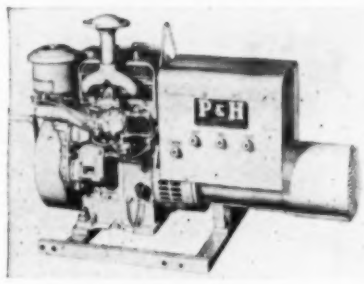
AIR POWERED HEAD for pressing, staking, riveting



Five-ton pressure is attained in the 1-in. stroke of model D 50 air powered head. Unit can be adapted to such production operations as pressing, staking and riveting, with mounting in any position, including upside down. Head operates on air pressures up to 150 lb with a ratio of 100 to 1. Overall size is 6½ x 6½ x 16 in. and gross weight is about 100 lb. The 1½-in. ram can be used for mounting tooling, puches, etc. Head can also be furnished in other sizes and capacities to specification. Made by **Air-Hydraulics, Inc.,** 231 Belden Rd., Jackson, Mich.

▲ For more details circle **NED-315 J4** on enclosed inquiry slip ▲

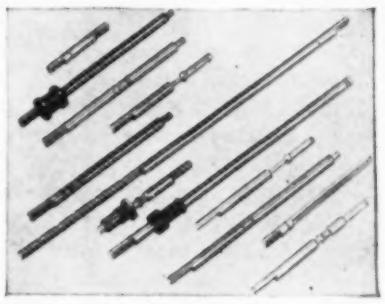
ARC WELDER is gasoline engine driven unit



Capacity of 20 to 200 amp is featured by model WN-150 arc welder which is powered by two-cylinder, air-cooled gasoline engine close coupled to welding generator. Control is simplified by use of plug-in stations and by variable speed engine which covers full heat range. Unit weighs 425 lb and measures 45 in. long by 20 in. high. It is available with two-wheel mounting. Made by **Harnischfeger Corp.,** 4601 W. National Ave., Milwaukee 46, Wis.

▲ For more details circle **NED-316 J4** on enclosed inquiry slip ▲

STANDARD SHAFTS unplated, cadmium or copper plated



For use in any equipment, shafts and assemblies permit flexible standardization through wide choice of design. Unplated, cadmium or copper plated steel shafts include varied diameters on a single shaft, snap-ring grooves, "D" or double "D" flats, knurling for bushings, and end-knurling for finger-tip actuation. Special control shaft assemblies, with or without cams, can be supplied ready for immediate chassis-mounting with flanged brass or steel externally-threaded bushings. Made by **Fox Products Co.,** 4718 N. Eighteenth St., Philadelphia 41, Pa.

▲ For more details circle **NED-317 J4** on enclosed inquiry slip ▲

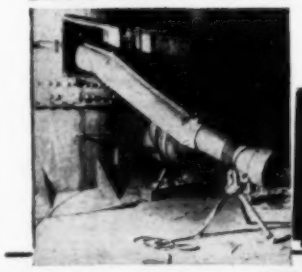
Drive out
FOUL AIR
Blow in
FRESH AIR
with Coppus Type A Ventilator

Assure greater safety, comfort for workers... get greater efficiency.

Drive out dangerous fumes, gases, stagnant or hot air from boilers, cable manholes, tanks, vats and other confined places. *Supply fresh air continuously.*

Send now for further information. Coppus Engineering Corporation, 409 Park Avenue, Worcester 2, Mass.

◀ **MANHOLES** made safe for workers' entrance within minutes.



◀ **BOILER AND TANK INTERIORS** cooled by Coppus. Fresh air supplied continuously.

ANOTHER **COPPUS** "BLUE RIBBON" PRODUCT

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NEW DESIGN IDEAS

for using neoprene, Du Pont's chemical rubber, are suggested by reports on how new products are developed... old ones improved... in every issue of the free

"NEOPRENE NOTEBOOK"

Mail the reader service card to get on the mailing list

DU PONT

BETTER THINGS FOR BETTER LIVING... THROUGH CHEMISTRY

NEOPRENE

The rubber made by Du Pont since 1932

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BETTER CUTS MAKE BETTER FITS FOR ROAD MACHINERY BUILDER

The ease with which good, square, accurate cuts are obtained on their Steelweld Shear has made it very popular with a road machinery manufacturer. They like the fast, simple knife-clearance adjustment—snappy low-inertia clutch and brake—heavy tight-gripping hold-downs—electric foot switch control—precise, smooth-rolling back gauge—general overall ruggedness.

You, too, will like ultra-modern Steelweld Shears.

STEELWELD Pivoted-Blade SHEARS CATALOG No. 2011

Send for free copy of catalog No. 2011.

THE CLEVELAND CRANE & ENGINEERING CO.
6643 E. 282nd St., Wickliffe, O.

STEELWELD SHEARS

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HOW TO INSURE TOP METALWORKING PERFORMANCE

for only **$1.00**

Send for a trial order of

CMD ANTI-SCORING LUBRICANTS

For top performance on lathe centers, grinding, press fit, stamping, die posts and many other operations—CMD ANTI-SCORING Lubricant can't be beat. It makes your operations smoother, faster, easier and of course more profitable. Prevents scoring, seizing, galling... all bugaboos in modern machining work. This trial order will start *you* on *your* way to top performance where a high pressure lubricant is needed. You will be surprised to find how long it lasts. Get yours today in both oil and grease consistencies.

TRIAL ORDER—TWO FOUR OZ. TUBES $1.00

Send me my order of CMD Lubricants right away! { Bill me / Bill my company }

Name _____
Company Name _____
Address _____
City _____ State _____

Chicago Manufacturing and Distributing Company
1902 West 46th St., Chicago 9, Illinois

CHICAGO MANUFACTURING & DISTRIBUTING CO.

▲ For more details circle **NED-321 J4** on enclosed inquiry slip ▲

the multi-purpose lifting machine for the small shop

STUEBING DESIGNED • STUEBING ENGINEERED • STUEBING BUILT

Hydrolift Straddle Stacker

here are the FEATURES . . . you want most in a mobile stacker

- Capacities to 2000 lbs.
- Power hydraulic telescopic lift.
- 4-wheel stability.
- Light in weight, highly maneuverable.
- Stacking made easy inside railroad cars or motor trucks.
- Low initial cost and upkeep.

Model HHL

LIFT TRUCKS INC. W. W. STUEBING CINCINNATI

The Hydrolift

fulfills the demand for an all-purpose hand truck in the average plant. It can be used for handling pallets, skids, dies, drums, barrels, sacked goods, and for numerous other non-routine jobs.

LIFT TRUCKS INC. 2423-2431 Spring Grove Ave. CINCINNATI 14, OHIO

For more details circle NED-322 J4 on enclosed inquiry slip

For faster, lower cost assembly...

You'll get big savings on assembly operations with Stackbin Assembly Bins. Work station layouts are more efficient. Parts are kept close to worker's hands . . . reaching and fumbling is eliminated. Shallow angle lip is just right for finger tip control. Operators can select with both hands. Sloping bottom feeds parts continually toward the front. With adjustable hoppers, there are always plenty of parts when and where they're needed.

Stacking feature permits rigid setups, allows flexibility when layout is changed.

Stackbin Assembly Bins feature all-welded construction with smooth, folded edges. 6 sizes with straight or tapered sides. Also available with rear-loading feature.

WRITE TODAY for full information on the Stackbin System of economical materials handling and storage.

Stackbin Corporation, 1081 Main Street, Pawtucket, R. I.

Mfgd. and sold in Canada exclusively by Wickware-Stackbin, Ltd., Ottawa

STACKBIN® SYSTEM "Stacked and Still Accessible"

For more details circle NED-323 J4 on enclosed inquiry slip

NEW

The Barnstead PRESSURE BANTAM DEMINERALIZER delivers MINERAL-FREE WATER at point of use

Delivers demineralized water in continuous flow under pressure at from 5 to 25 gallons per hour. Connects to any water line. Like turning on a faucet. Minerals are chemically removed from water by ion-exchange. No heat or cooling water employed. Uses high capacity replaceable cartridge. Hundreds of uses in industry. Bulletin #128 describes most of them.

Write for Bulletin #128

Barnstead STILL & STERILIZER CO.

16 Lanesville Terrace, Forest Hills, Boston 31, Mass.

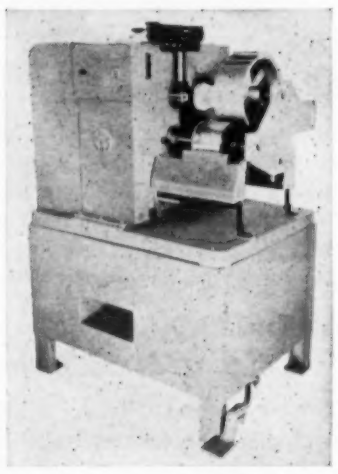
For more details circle NED-324 J4 on enclosed inquiry slip

FILTER CHANGE INDICATOR shows need of replacement, cleaning

Loss of heat or air flow due to filter clogging is detected by the Filter-Chek which measures drop in static pressure as compared with normal operation. Difference is registered by indicator on the scale of the instrument, mounted on furnace or duct in about 10 minutes. It measures 4 x 5 x 1¼ in. and utilizes a bronze shaft in glass jewels for suspension of the indicator vane. Pressure variations are transmitted to the vane through an air tube projecting inside the duct system. An orifice can be calibrated to a wide range of initial settings. Moisture and dustproof instrument sells for $9.95. Made by **Rex Metal-Craft, Inc.,** 1710 Gent St., Indianapolis 2, Ind.

For more details circle NED-325 J4 on enclosed inquiry slip

DESIGN PRINTING MACHINE for cylindrical or curved objects



Decorative designs or trademarks can be printed in one or two colors on cylindrical, semicylindrical and compound curved objects of glass, plastics and other materials by this Markem 67A machine. Rotary printing mechanism, using flexible printing mat, assures good color registration. Machine is manually operated and, when object shape permits, can be equipped with automatic feed and ejection mechanisms. Production ranges from 20 to 60 objects per minute. Maximum imprint size is 4 in. top to bottom, 15 in. around circumference. Articles as large as 12 in. diameter can be handled. Power is supplied by ⅓-hp, single cycle, variable speed motor. Made by **Markem Machine Co.,** Keene 45, N. H.

For more details circle NED-326 J4 on enclosed inquiry slip

Phillips & Slotted Wood Screws

Southern Screw Co.—All wood screws made by this company are standard in slotted and Phillips, flat, round and oval heads, and come in steel, brass, silicon bronze, aluminum, stainless steel and various plated finishes. Also covered are drive screws, hanger bolts, knob screws and dowel screws.

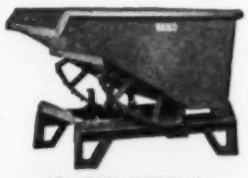
For more details circle NED-327 J4 on enclosed inquiry slip

move it → or stack it ↑ with Brusco parts handling equipment

BRUSCO DROP DOOR PARTS BOX

No. 558 BRUSCO CORRUGATED SKID BOX

No. 559 BRUSCO CORRUGATED SKID BOX



No. 1210 BRUSCO SELF-DUMPING HOPPER

Save time, space, dollars. BRUSCO is *all steel*, welded for *strength* and *rigidity*. Meets every problem of materials handling. Ask for Bulletin 550.

BRUMMELER STEEL PRODUCTS CORPORATION

1411 Ionia Ave., S. W. Grand Rapids, Michigan

For more details circle NED-328 J4 on enclosed inquiry slip

ONE call can answer ALL your gear and sprocket needs!

. . . when you call on the complete UNION GEAR LINES AND SERVICES

Write today for your copy of our catalog

UNION GEARS

Union Gear & Sprocket Corp. 114-120 Purchase St. Boston, Mass.

For more details circle NED-329 J4 on enclosed inquiry slip

HOW USS GERRARD STRAPPING CAN SAVE YOU MONEY

● If you've been under the impression that you can't afford to use steel strapping in your packaging operation, it might be worth your while to think about this.

GERRARD Round Steel Strapping costs about *40% less* than any other form of metal reinforcement.

GERRARD'S semi-automatic Model "Q" machine, using Round Strapping, can make 12 to 15 tight, pilfer-proof ties per minute—*steel* ties, securely closed with the rugged GERRARD twist-knot. GERRARD'S hand-operated stretchers and sealers do their job quickly and easily on super-strong USS GERRARD *Flat* Steel Strapping.

Result—a fast, neat, A-1 tying job done in less time at less cost. You get more output per man hour, and you'll find your packaging chores easier to do since GERRARD Round Strapping ties flats, rounds, heavy or light bundles with equal proficiency.

Contact a GERRARD engineer. He'll be happy to show you how to convert your present tying operation to the quick, efficient GERRARD Method of tying with *steel*. His recommendations won't cost you a cent. Write now.

GERRARD STEEL STRAPPING DIVISION
UNITED STATES STEEL CORPORATION
4717 South Richmond St., Chicago 32, Ill.

USS GERRARD ROUND STEEL STRAPPING FLAT STEEL

UNITED STATES STEEL

For more details circle NED-330 J4 on enclosed inquiry slip

VARIABLE SPEED CONTROL

Variable speed control of V-belt and equipment up to a maximum 3 to 1 ratio is provided by this single lever controlled unit. Mechanically simple in design and sturdily constructed to withstand hardest service, models 1A and 2A Toledo variable speed controls have numerous unique features including: plain, smooth pulley, eliminating noise and vibration; stepless speed variation up to full 3 to 1 ratio; minimum pulley diameters are increased to transmit greater H.P. over entire range; new pulley design providing cylindrical bottom for V-belts which fixes minimum pitch diameter, preventing damage to belts and giving increased torque; single arm support, for easy belt application; large shaft, oilite bearings and lubricant reservoir; sector plate serving as dial indicator and additional locking medium; unusually attractive prices.

Wheel assemblies can also be purchased without mountings for application on machines providing built-in speed control.

If you have a variable speed control problem, either on plant equipment or on machinery you build for sale, investigate the Toledo variable speed control . . . you'll be interested in its efficiency and low price. Ratios as high as 10 to 1 are available. **The Toledo Timer Co.,** 2224 Albion St., Toledo, O. **Adv.**

▲ For more details circle **NED-331 J4** on enclosed inquiry slip ▲

CUTTING PADS

- LONGER LIFE
- QUIETER CUTTING
- CLEANER, SAFER CUTS
- USABLE ON BOTH SIDES

Colonial self-healing Cutting Pads on clicker machine or hand die cutting often double, even triple die life. Clean, sharp cuts, no bounce backs, no splinters. Use Colonial Cutting Pads to cut leather, rubber, plastics, candy, paper, fibre, cork, felt, cloth, light gauge metals. 63C-1

Write for Sizes, Prices — Address Dept.

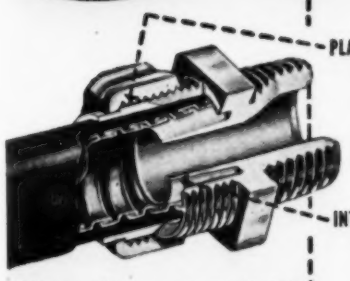
COLONIAL RUBBER CO.
RAVENNA, OHIO

▲ For more details circle **NED-332 J4** on enclosed inquiry slip ▲

NEW

T&B ENGINEERED

CONNECTORS FOR LIQUID-TIGHT FLEXIBLE METAL CONDUIT



PLASTIC GRIPPING RING
- Seals out all moisture, oil, and corrosive fluids.
- Protects plastic conduit sheath against damage.
- Gives visual installed assurance of a proper ground.
- Color-coded for each conduit size.

INTEGRAL TAPERED BODY WEDGE
- Positively grounds metal spiral inside conduit.
- Fits all thicknesses and convolutions in standard Liquid-Tight Flexible Metal Conduit.
- Grounding member integral with body.

Self-grounding . . . no complicated assemblies. Conduit slides straight into complete connector—no need to disassemble connector. Same wrench fits both body and gland nut. For conduit from 3/8" to 2". Straight connectors, 45° and 90° elbows available. Write for folder. T323

THE THOMAS & BETTS CO.
INCORPORATED
24 Butler Street, Elizabeth 1, New Jersey
Thomas & Betts Ltd., Montreal, P.Q., Canada

▲ For more details circle **NED-333 J4** on enclosed inquiry slip ▲

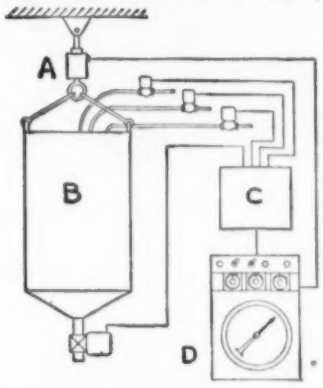
COLLET CHUCK
for use on small lathes

Precision features which make it as concentric as the bearing of a lathe or machine are incorporated in the Regal 5C collet chuck. It has a maximum capacity of 1 in. and uses standard 5C collets which are used on such small lathes as 9-in. South Bend, 10-in. Logan, 10-in. Atlas and 10-in. Sheldon. Full spindle capacity of these machines can be used. Chuck can also be used as a holding fixture on drill presses, horizontal and vertical milling machines and jig borers. Quarter-turn of removable handle tightens or loosens the workpiece. Made by **Royal Products,** 82 Union St., Mineola, L. I., N. Y.

▲ For more details circle **NED-334 J4** on enclosed inquiry slip ▲

BATCH WEIGHING EQUIPMENT
for liquid or bulk materials

High-speed model 140 Auto-Batch weighing equipment is available to handle materials batching from a few pounds to several thousand pounds. It consists of load cell (A) supporting tank or bin (B), electronic indicator recording controller (D) to convert load signal into proper functions and control relay (C) to sequence functions in proper order and duration. One to 12 different ingredients can be handled, amount of each being set on a selection dial. After selections have been made, machine can be put on a repeat or single cycle as desired. Instrumentation and control relay can be remotely located and equipment can handle multi-tank or hopper arrangements. Automatic tare check system weighs batches, weight of each being permanently recorded. Made by **Gilmore Industries,** Dept. S, 5713 Euclid Ave., Cleveland 3, O.



▲ For more details circle **NED-335 J4** on enclosed inquiry slip ▲

Air-Gas Torches

National Welding Equipment Co.—Various types and sizes of air-gas torches in industry are described in illustrated form 8 of 36 pages. Torches described use manufactured or natural gases, bottled butane or propane and, with a quick change, can use oxygen instead of compressed air. Accessories are also covered.

▲ For more details circle **NED-336 J4** on enclosed inquiry slip ▲

DO THIS
If You Want to

STOP LEAKS

. . Seal Out Dampness in Basement Walls!

Leaks in concrete walls, masonry, cinder block, etc., can be stopped quickly with FLEXTITE. Actually seals against water pressure. Efficient as a trowel coat for sealing off water and dampness. Transforms leaky basement walls into dry surfaces. (Minimum quantity 6 gallons)

USED IN
- ELEVATOR PITS
- TUNNELS, DRAINS
- WATER TANKS
- RETAINING WALLS

MAIL COUPON FOR TRIAL OFFER

FLEXTITE

FLEXROCK COMPANY • *Offices in Principal Cities*
3603-F Filbert St., Philadelphia 1, Pa.
Please send me complete FLEXTITE information and details of TRIAL ORDER PLAN—no obligation.
Name ..... Title .....
Company .....
Address .....

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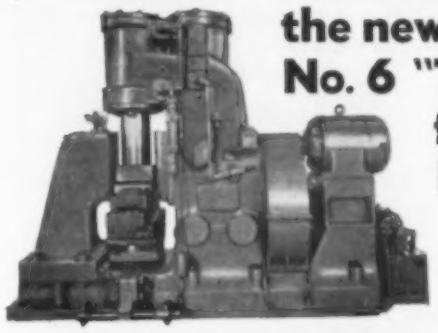

the new NAZEL No. 6 "TYPE C" forging hammer

JUST LOOK AT THESE FEATURES!
- Outboard Ram Guide, which allows both open and closed die forging and insures positive die mating . . . Anvil is mated to base for exact register.
- Die capacity is exceptionally large. Upper die shown is 14" by 40" by 7".
- Hydraulic Power Control . . . gives "feather touch" treadle or hand control changeable or removable for convenience.
- Light to heavy blow at touch of Control to suit job. Coining, planishing or forging.
- Direct Power Drive, with pinion running in oil for longer life.
- Modern Lubrication to *all* moving parts.
- Completely self-contained!
- This new NAZEL No. 6 "Type-C" is a floating ram hammer at its best . . . designed for continuous production, proper forging ratio . . . and, it is *economical!*

Further details are yours upon request.

LOBDELL UNITED COMPANY
1856-1954 WILMINGTON 99, DELAWARE
A SUBSIDIARY OF UNITED ENGINEERING AND FOUNDRY COMPANY

▲ For more details circle **NED-338 J4** on enclosed inquiry slip ▲

In a four month period under actual competitive conditions one Diamond Wheel ground 36,976 pieces, while eight silicon carbide wheels ground a total 16,023 pieces.
RESULT—
1. Less cost per piece 2. Greater Production
3. Less down time.

See for yourself how
SECOMET DIAMOND WHEELS
can provide you with these plus values

Send for informative catalog #54 or contact us direct for information and assistance.

J. K. SMIT & SONS, INC.
MURRAY HILL, NEW JERSEY

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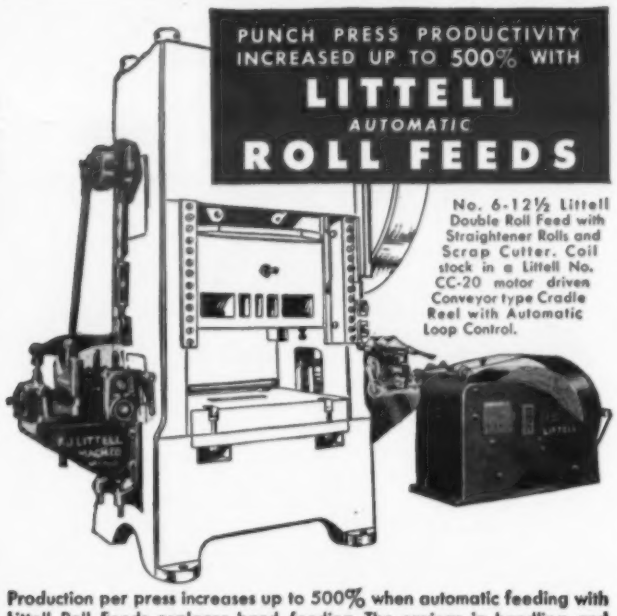
PUNCH PRESS PRODUCTIVITY INCREASED UP TO 500% WITH

LITTELL AUTOMATIC ROLL FEEDS



Production per press increases up to 500% when automatic feeding with Littell Roll Feeds replaces hand feeding. The savings in handling and storage of coil stock added to the economies of faster production produce an automation dividend. Littell Roll Feeds in a wide range of sizes and models handle stock up to .156" maximum thickness and up to 72" maximum width at speeds of 50 to 250 strokes per minute. Lengths fed per stroke range up to 50". Standard Littell Automatic Feeds serve all types and sizes of presses. *WRITE FOR THE LITTELL ROLL FEED CATALOG*

F. J. LITTELL MACHINE CO. — Speed with Safety

ROLL FEEDS • DIAL FEEDS
STRAIGHTENING MACHINES
REELS • AIR BLAST VALVES
District Offices: Detroit, Cleveland

4169 N. RAVENSWOOD AVE., CHICAGO 13, ILL.

▲ For more details circle NED-340 J4 on enclosed inquiry slip ▲

HOW **XEROGRAPHY**

(ZE-ROG-RA-FEE)

Cuts Duplicating Costs

of engineering drawings AT FORD MOTOR COMPANY

Cost study indicates savings of approximately $75,000 a year!

An extensive study of office equipment by analysts in Ford Motor Company's Central Office, indicates that offset paper masters prepared by the xerographic process, as compared to various other methods, save time and money.

XeroX® Lith-Master* copying equipment is used in a number of departments in various Ford plants. Special XeroX copying equipment is used in the Duplicating Section of the Engineering Staff, Administrative Services Department, Dearborn, Michigan, to prepare offset paper masters of 12" x18" engineering drawings for runoff of multiple copies on an offset duplicator. Using the xerography and offset combination, 100 copies of a drawing can be made in five minutes at a cost of about 97 cents, which is considerably less than by other duplicating methods. Cost studies indicate a saving of approximately $75,000 a year.

There is no limit to the versatility of xerography, the dry, electrostatic, copying process, in paperwork duplicating applications. Copies can be enlarged, reduced or made same size of anything written, typed, printed or drawn from one or both sides of original. *Translucent intermediates can be made for use in diazo type machines.*

*A TRADEMARK OF THE HALOID COMPANY

WRITE for proof of performance folders showing how Ford Motor Company and companies of all kinds are cutting costs and speeding paperwork with xerography.

THE HALOID COMPANY
54-62X HALOID STREET • ROCHESTER 3, NEW YORK
BRANCH OFFICES IN PRINCIPAL U.S. CITIES AND TORONTO

XEROGRAPHY
THE FASTEST, CHEAPEST, MOST VERSATILE WAY TO MAKE MASTERS FOR DUPLICATING.

XEROX

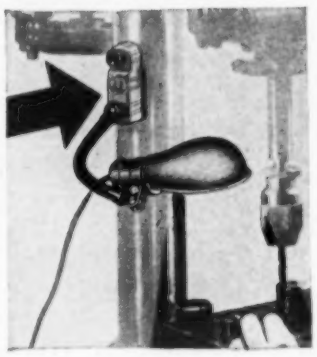
▲ For more details circle NED-341 J4 on enclosed inquiry slip ▲

FORCE GAGE
measures spot welder tip pressures

Accurate measurements of tip force on spot welders can be made with this simple gage. Capacity of dual range instrument is up to 3000 lb in 10-lb increments. Insulated pads protect gage against damage from welding current so that measurements can be taken with welder energized. Instrument, which can also be used as a dynamometer to measure drill press and other forces, is supplied in a cork-lined steel case with black wrinkle finish. It is light and completely portable. Made by **Peer, Inc.,** 1248 Milton St., Benton Harbor, Mich.

▲ For more details circle NED-342 J4 on enclosed inquiry slip ▲

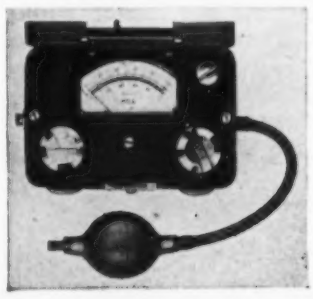
MAGNETIC BASE LIGHT UNIT
has ball socket and flexible stem



Light positioning at any angle is possible with Tiny-Titan No. 250 magnetic base lighting unit which features ball and socket flexible stem assembly. Unit has a 9-in. stem and will take up to 100-w incandescent bulb. Plastic base with parallel steel ribs on bottom has 125-lb magnetic grip. It can be mounted to rods as small as ¾-in. diameter. Vibration from running equipment will not dislodge unit from its position. Eight-foot cord is oil-resistant. Made by **Enco Mfg. Co.,** 4524 W. Fullerton Ave., Chicago 39, Ill.

▲ For more details circle NED-343 J4 on enclosed inquiry slip ▲

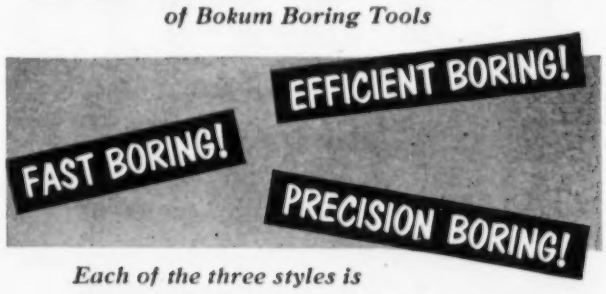
GAS LEAK DETECTOR
locates leaks in underground lines



Any underground gas leak can be pinpointed without digging up the pipe using the Gascope detector. Compact and lightweight instrument has two ranges, one for measurement of concentrations below the lower explosive limit and one for higher concentrations. Readings are shown on a meter and range selection is governed by a single switch. Flashlight batteries are used for electrical energy. Made by **Mine Safety Appliances Co.,** 220 N. Braddock Ave., Pittsburgh 8, Pa.

▲ For more details circle NED-344 J4 on enclosed inquiry slip ▲

These phrases briefly describe the Performance of Bokum Boring Tools



Each of the three styles is designed for its own specialized purpose:

All the styles are characterized by the same
UNIQUE FORM
HELICAL BACK OFF
RESHARPENING ON ONE FACE ONLY

Available in high speed steel, carbide-tipped, solid carbide — in standard sizes and with short neck lengths. Put up in special wooden boxes in a variety of size assortments to meet your specific needs.

Write to Dept. T for complete catalog.

No. 1139-6—HSS
No. 398-6—Carbide-tipped
No. HSS 500—Short neck lengths
No. CT 500—Short neck lengths (carbide-tipped)

TRADE MARK REG. U. S. PAT. OFF.

BOKUM TOOL CO. 14775 Wildemere Ave., Detroit 38, Mich.

▲ For more details circle NED-345 J4 on enclosed inquiry slip ▲

THREE GREAT STRIPPING AIDS FOR PLATERS

Udylite offers these fine MacDermid immersion strippers for removing nickel and copper from steel, zinc die cast and brass base metals.

METEX STRIP AID
A water soluble powder, which when dissolved with sodium cyanide in a water solution, will strip nickel, brass and copper from ferrous metals by immersion.

METEX DB ACID ELECTROLYTIC STRIP
A strongly acid solution used for anodically stripping nickel and copper from zinc die castings or nickel from brass.

METEX NICKEL STRIPPER BR
Here is a water soluble powder designed to strip nickel from brass and copper alloys in an acid solution.

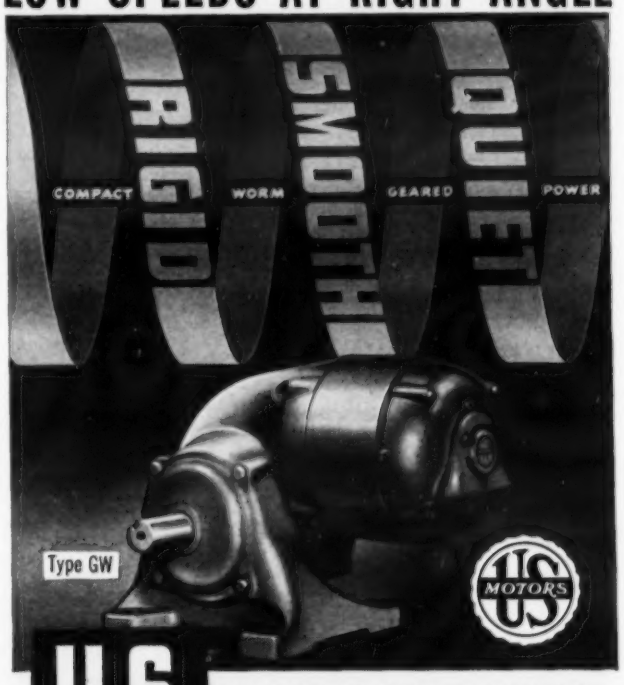
For technical data call your Udylite representative (see yellow pages) or write direct.

THE *Udylite* CORPORATION
DETROIT 11, MICHIGAN

WORLD'S LARGEST PLATING SUPPLIER

▲ For more details circle NED-346 J4 on enclosed inquiry slip ▲

LOW SPEEDS AT RIGHT ANGLE



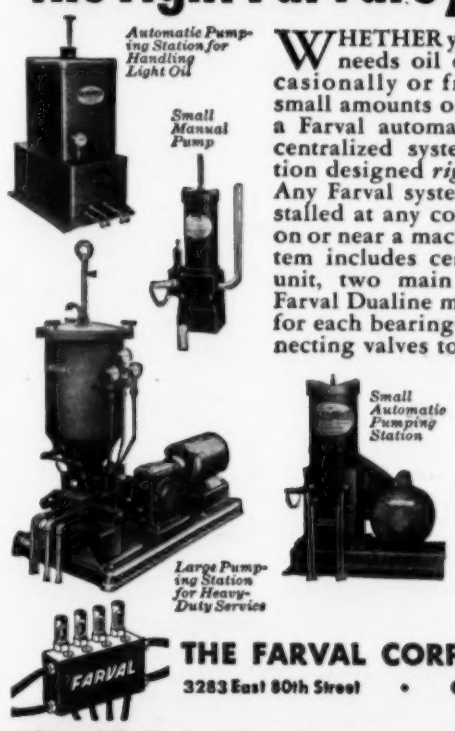
U.S. SYNCROGEAR MOTOR

20 to 155 RPM – ¼ to 3 HP *Request Bulletin*

U.S. ELECTRICAL MOTORS Inc.
BOX 2058, LOS ANGELES 54, CALIFORNIA MILFORD, CONN.

▲ For more details circle NED-347 J4 on enclosed inquiry slip ▲

This will help you choose the right Farval system



WHETHER your equipment needs oil or grease—occasionally or frequently—in small amounts or large, there's a Farval automatic or manual centralized system of lubrication designed *right* for the job! Any Farval system is easily installed at any convenient place on or near a machine. Each system includes central pumping unit, two main supply lines, Farval Dualine measuring valve for each bearing and lines connecting valves to bearings.

GET DATA ON THE COMPLETE FARVAL LINE BY WRITING FOR FREE BULLETIN 26

THE FARVAL CORPORATION
3283 East 80th Street • Cleveland 4, Ohio

Affiliate of The Cleveland Worm and Gear Company, Industrial Worm Gearing

▲ For more details circle NED-348 J4 on enclosed inquiry slip ▲

Drill Hardened Steels without Annealing—

With the new, improved "HARDSTEEL" Drill, you can do accurate, smooth drilling, countersinking, counterboring and reaming in steels hardened by any process without first annealing the work. And they work with equal ease on work-hardening steels and high carbon—high chrome steels of any degree of hardness.

"HARDSTEEL" Drills fit standard drill presses. They save time and reduce rejects. They permit engineering changes requiring additional drilling after hardening. And parts drilled after hardening always match at assembly.

Write for a copy of the "HARDSTEEL" Operators Manual showing how "HARDSTEEL" drills are cutting costs in thousands of plants.

You Harden It—We'll Drill It—With "HARDSTEEL"

BLACK DRILL COMPANY, INC.
1380 East 222nd St. • Cleveland 17, Ohio

Also makers of— BLACK DRILLING UNITS—AUTOMATIC, SELF-CONTAINED—FOR COST-CUTTING PRODUCTION ON ALL MATERIALS *Write for information*

▲ For more details circle **NED-349 J4** on enclosed inquiry slip ▲

Corning heating panels are suitable for operation at temperatures as high as 660°F., range in watt densities from 2.6 to more than 9 watts per square inch.

New Corning industrial radiant panels give uniform heat distribution

Corning heating panels radiate infrared rays in a manner that gives you unrivaled uniformity of heat distribution without need of deep reflectors.

Because the heat is radiated from a flat glass surface, distribution is uniform, little is lost to the air and no oppressive heat surrounds the installation to reduce worker efficiency and comfort. Since there is no glow, you also eliminate eyestrain and fatigue from glare.

The Corning panels emit long wave-length radiation (exceeding 4 microns). Most materials, *regardless of surface texture or color,* absorb such radiation as black bodies, permitting maximum absorption of heat energy. The panels are smokeless and sootless, easy to install, safe to operate. The electrically conductive surface of the glass is the back surface—away from the work and completely enclosed.

You can build tunnels or towers utilizing practically every square inch for radiant heat, or you can suspend banks of panels overhead to save floor space. Each panel carries a one-year warranty.

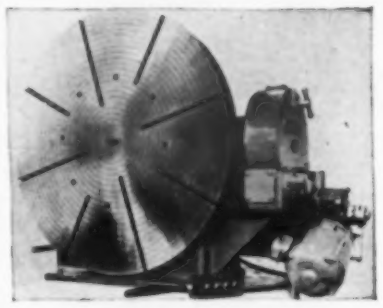
For other features of this new concept in infrared heating, including design specs and diagrams, write for Bulletin B-89—or check this publication's inquiry slip.

CORNING GLASS WORKS
79 CRYSTAL STREET
CORNING, N. Y.

Corning means research in Glass

▲ For more details circle **NED-350 J4** on enclosed inquiry slip ▲

UNIVERSAL POSITIONING TABLES for precision checking, machining

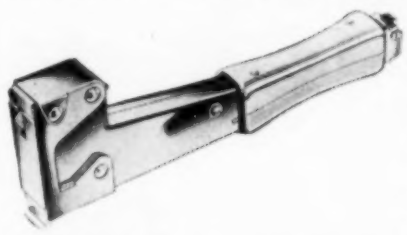


Improved line of Rotab universal positioning tables (*NED — Sept.* '52) for precision checking and machining operations have modified design to permit use of power tilting. Cone-Drive shaft mounted speed reducers are used with ¾ and 1½-hp motors on the 36 and 48-in. table diameter models. Table movement from vertical to horizontal or return takes 15 seconds. Tilt angle accuracy is checked by precision vernier and final adjustments can be made with a hand wheel. Made by **Machine Products Corp.,** 6763 E. McNichols Rd., Detroit 12, Mich.

▲ For more details circle **NED-351 J4** on enclosed inquiry slip ▲

HAMMER TYPE TACKER accommodates three staple sizes

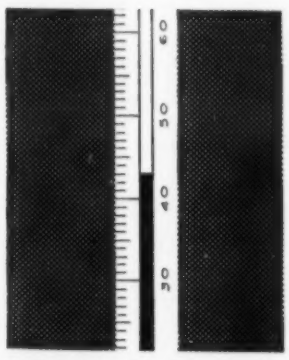
Operated with one hand and weighing only 2½ lb, the HT-50 automatic hammer tacker is balanced for continuous use with minimum of operator fatigue.



It is 11¼ in. long and will drive staples ¼, ⅜ and ½-in. leg sizes. Nonclogging tool holds 100 staples and is easily loaded or changed from one staple size to another. Staples are made of wedge-pointed 0.050-in. steel wire. Use may be for fastening roofing felt, insulation, shipping labels, canvas, paper or cardboard signs, fabrics, light metals and paddings. Made by **Arrow Fastener Co.,** 8 Junius St., Brooklyn 12, N. Y.

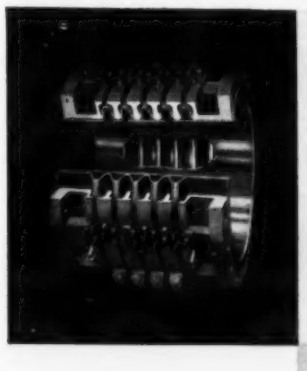
▲ For more details circle **NED-352 J4** on enclosed inquiry slip ▲

MERCURY THERMOMETERS indicate in black on white



A jet-black thread against a white background is presented by Quiksite black-reading mercury thermometers for clear, quick reading. Exterior reflections which make mercury instruments difficult and slow to read are nullified by maximum contrast of black on white. Made by **H-B Instrument Co.,** Dept. T-27, American & Bristol Sts., Philadelphia 40, Pa.

▲ For more details circle **NED-353 J4** on enclosed inquiry slip ▲



INSIST ON THE BEST...

Zallea

DUO-EQUALIZING EXPANSION JOINTS

Request Bulletin 351.

ZALLEA BROTHERS
818 Locust Street
Wilmington 99, Delaware

World's Largest Manufacturer of Expansion Joints

▲ For more details circle **NED-354 J4** on enclosed inquiry slip ▲

Cut Costs with MEAD MIDGET Air-Clamps

PNEUMATIC CYLINDERS

Horizontal and Vertical!

Both models deliver 80 lbs. pressure on a line pressure of 100 lbs. They'll save countless man-hours in assembly operations involving welding, riveting, bolting, etc. *Advantages over mechanized clamps:* 1. Any number can be operated by single master valves. 2. Easily installed in cramped corners. 3. Equal ram pressure at any stroke point. Send for new Mead AIR POWER Catalog, describing our line of Air-Clamps, Air Vises, Air Presses, Work Feeders, Valves, Controls, etc.

MEAD SPECIALTIES COMPANY
4114 No. Knox Ave., Dept. N-94-A, CHICAGO 41, ILLINOIS

▲ For more details circle **NED-355 J4** on enclosed inquiry slip ▲

NEW SPEED

3 SIZES

for OVER-UNDER WEIGHING with TOLEDO SPEEDWEIGH®

Here's *new speed with accuracy* for you in check weighing, packaging, many other operations today . . . 3 sizes—to 5 lb., to 20 lb., to 50 lb.! Shadowfree wide-angle reading . . . accurate to 1/64 of an ounce . . . new improved knife-edge check link system . . . *exclusive* "coined" bearings for greater accuracy, longer life . . . stainless steel beam . . . enclosed levers in one-piece housing . . . choice of platters and scoops . . . many more *plus* features! Write for bulletin 1416. Toledo Scale Company, Toledo 1, Ohio.

TOLEDO® Headquarters for SCALES

▲ For more details circle **NED-356 J4** on enclosed inquiry slip ▲

GOT A WEB GUIDING PROBLEM?

ASKANIA EDGE POSITION CONTROL
for every web guiding job!

12 page Bulletin describes this simple, easy to install, easy to maintain system. Only a breath of air touches the controlled material—yet speed and force available for correction are practically unlimited. Write for your copy of Bulletin 161.

ASKANIA REGULATOR COMPANY
258 E. Ontario Street, Chicago 11, Illinois
Subsidiary of General Precision Equipment Corp.

▲ For more details circle **NED-357 J4** on enclosed inquiry slip ▲

Protects AIR TOOLS AND EQUIPMENT

against rust, scale and condensation in the air line ...provides constant lubrication

The Keller Lubricator-Filter operates automatically when air tools or equipment are in operation. Filter removes moisture as well as solids—easily cleaned by opening drain cock at bottom. Oil feeds from the lubricator through an upright wick—no flooding or waste when tools are not in use.

Transparent bowls show when filter needs draining, or when light spindle oil should be added to lubricator. Write for descriptive Bulletin #65-5.

Send for illustrated descriptive bulletin and detailed information

Keller Tool Company
1331 Fulton St., Grand Haven, Mich.

▲ For more details circle NED-358 J4 on enclosed inquiry slip ▲

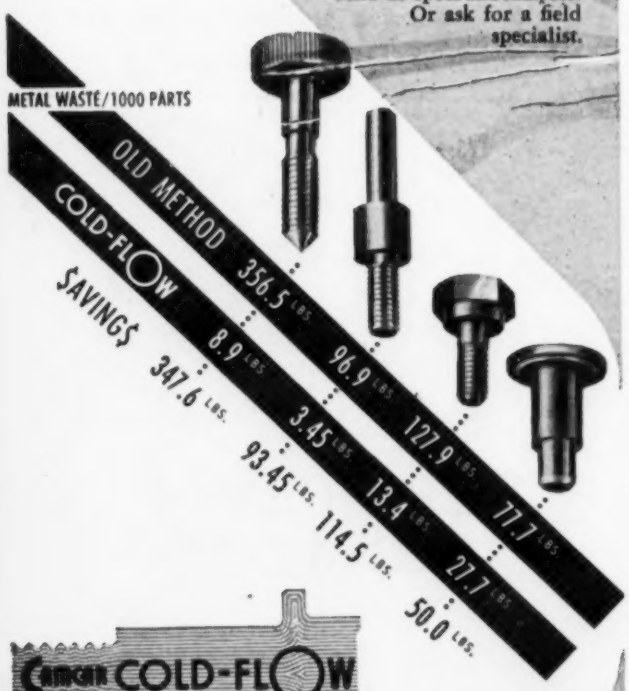
CAMCAR

COLD-FLOW SKINS THE COST CAT

... by *pressure-forming* metal parts from wire stock ... in contrast to older methods that cut out parts from large diameter bars. And Cold-Flow skins the cat in other ways ... reduces assembly time, by forming single intricate shapes replacing two and three-part units.

Cold-Flow strengthens the stock. Metal grain smoothly follows the part contour ... is particularly compressed at the surface for a smooth wear-resistant hide. A prolific producer in most all metals, Cold-Flow delivers parts in volume to keep your assembly purring.

Send us specs and samples. Or ask for a field specialist.



CAMCAR COLD-FLOW

CAMCAR SCREW & MFG. CORP.
ROCKFORD, ILLINOIS
TELEPHONE 5-9451
TELETYPE RK-8653

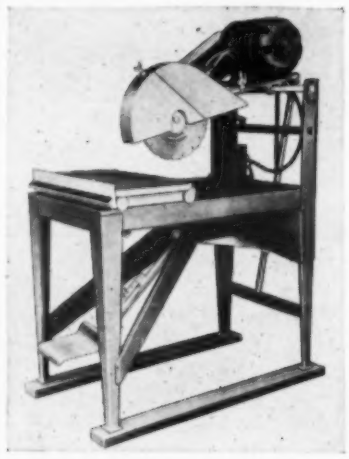
▲ For more details circle NED-359 J4 on enclosed inquiry slip ▲

FORK LIFT TRUCKS
gas powered, rated 5000 and 6000 lb

Designed to speed heavy materials handling work both in and outdoors, model FD 50 and FD 60 fork lift trucks have gasoline engines directly coupled to a generator which powers a series motor on the drive axle. This transmission arrangement is coupled with worm gearing for heavy loads under maximum power. An inching control permits high speed hoisting at low travel speeds. Model FD 50 will handle loads up to 5000 lb. Model FD 60 has a 6000-lb load capacity, and will do a day's work on less than 5 gallons of gasoline. Made by **Baker-Raulang Co.**, 1245 W. 80th St., Cleveland 2, O.

▲ For more details circle NED-360 J4 on enclosed inquiry slip ▲

MASONRY SAW
for wet or dry cutting



Removable head of Di-Met masonry saw is driven by a 1½-hp single-phase motor. Unit features large capacity and easy arbor height adjustment. Angle, skew, through and step cutting operations can be performed. Independent electric circulating pump supplies coolant from the tray to both blade sides when required. It can be detached for dry cutting. Machine uses either abrasive or diamond wheels, and has split wheel guard which exposes any part of the wheel desired. Spindle and rolling table are ball-bearing mounted. Made by **Felker Mfg. Co.**, 1125 Border Ave., Torrance, Calif.

▲ For more details circle NED-361 J4 on enclosed inquiry slip ▲

Turret Drills

Burg Tool Mfg. Co.—How the Burgmaster automatic hydraulic six-spindle model 2BH and eight-spindle model 3BH turret drills can increase production, improve quality and decrease handling and production costs is told in this illustrated bulletin. Operating instructions and data on accessories are included.

▲ For more details circle NED-362 J4 on enclosed inquiry slip ▲

PAYS FOR ITSELF QUICKLY IN LABOR SAVING

SABIN One-Man BARREL TRUCK

LOOK AROUND! How many of your employees are used to handle heavily loaded barrels and drums? You can reduce the number to ONE and save plenty by using a Sabin Barrel Truck.

OPERATION IS EASY—you run truck up to container, hook on at top and pull back on handle to pick up load. *Third Wheel Feature* assures better balance and added safety.

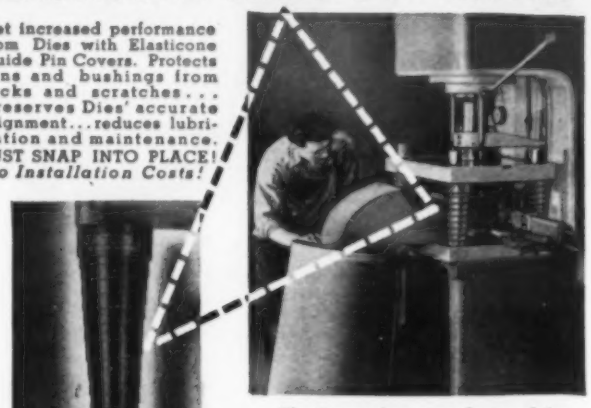
WRITE FOR BULLETIN NO. 48-A

THE SABIN MACHINE CO.
6536 Carnegie Ave.,
Cleveland 3, Ohio

▲ For more details circle NED-363 J4 on enclosed inquiry slip ▲

DIE LIFE INCREASED 25% with ELASTICONE® GUIDE PIN COVERS

Get increased performance from Dies with Elasticone Guide Pin Covers. Protects pins and bushings from nicks and scratches . . . preserves Dies' accurate alignment . . . reduces lubrication and maintenance. JUST SNAP INTO PLACE! *No Installation Costs!*



Investigate today the many new cost-saving engineering advantages in die designing with Elasticones.

Elasticones are manufactured in stock sizes. Specify O.D. of bushing and full open height of set when ordering.

Write for full information and literature.

CENTRAL

2208 EAST HUNTINGDON ST. PHILA. 25, PA.

CENTRAL SAFETY EQUIPMENT COMPANY

▲ For more details circle NED-364 J4 on enclosed inquiry slip ▲

NEW!

Manifold equipped with five simultaneous, instantaneous-acting cylinders.

"Helping Hands" for Hundreds of Jobs!

Now . . . miniature pneumatic cylinders . . . smaller than your fingers, with power to do hundreds of activating, holding, control, or feeding jobs. In electrical or mechanical testing, assembly, control, holding or work feeding setups . . . operated automatically or by foot valves . . . they help you produce better products, faster at lower cost by supplying workers with extra fingers and hands!

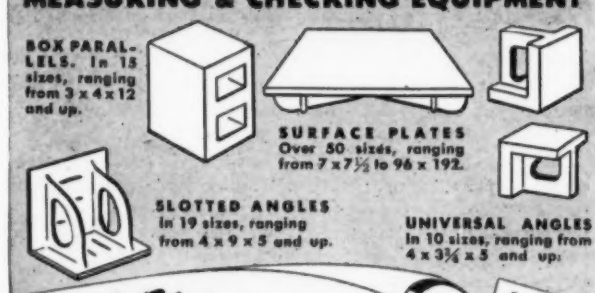
The Clippard Miniature Pneumatic Cylinder is just 2¹⁄₁₆" long x ⅞" diameter with maximum ¹⁄₂" stroke and spring return; operates from air line on as little as 12 psi. 12-port manifold and complete line of fittings available.

Illustrated literature, including power and static data, dimensional drawings, specifications and price list . . . free on request by writing.

Clippard INSTRUMENT LABORATORY, INC.
7390 Colerain Road, Cincinnati 24, Ohio
Manufacturers of R. F. Coils and Electronic Equipment

▲ For more details circle NED-365 J4 on enclosed inquiry slip ▲

Dependable
MEASURING & CHECKING EQUIPMENT



BOX PARALLELS. In 15 sizes, ranging from 3 x 4 x 12 and up.

SURFACE PLATES Over 50 sizes, ranging from 7 x 7½ to 96 x 192.

SLOTTED ANGLES In 19 sizes, ranging from 4 x 9 x 5 and up.

UNIVERSAL ANGLES In 10 sizes, ranging from 4 x 3¾ x 5 and up.

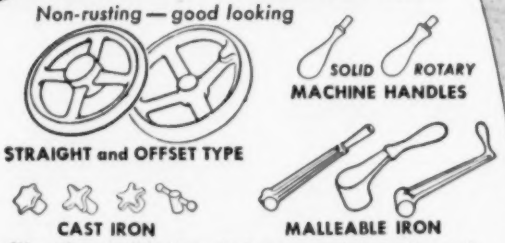
and Now

Send for Complete Catalog

HAND WHEELS, KNOBS, HANDLES

Cadmium Plated READY TO DELIVER

Non-rusting — good looking



SOLID ROTARY MACHINE HANDLES

STRAIGHT and OFFSET TYPE

CAST IRON MALLEABLE IRON

We also build jigs, fixtures, special tools and machinery. Send us your blueprints.

MACHINE PRODUCTS CORPORATION
6771 E. McNichols Rd. Dept. B Detroit 12, Mich.

▲ For more details circle NED-366 J4 on enclosed inquiry slip ▲

Need VOLUME on SMALL PARTS like these?

Investigate

MULTI-SWAGE

● If it's VOLUME you need on small tubular metal parts similar to these, be sure to look into Bead Chain's MULTI-SWAGE Process. Many prominent users of solid pins for electronic and mechanical purposes have cut costs by switching to Multi-Swaged *tubular* pins . . . without sacrificing strength or accuracy. Multi-Swage Parts serve in a wide variety of electronic and mechanical products. Send part (up to ¼" dia. and to 1½" length) and your specs for a quotation. Or write for DATA BULLETIN.

The BEAD CHAIN Mfg. Co.
TRADE MARK
16 Mountain Grove St., Bridgeport 5, Conn.
Manufacturers of BEAD CHAIN — the kinkless chain of a thousand uses, for fishing tackle, novelty, plumbing, electrical, jewelry and industrial products.

▲ For more details circle **NED-367 J4** on enclosed inquiry slip ▲

PANGBORN BLASTS by don herold

COST-CUTTING STORY OF THE PANGBORN BLAST CLEANING MACHINE

Pangborn Blast Cleaning Machine—available in six types, stationary or portable—delivers efficient, low-cost maintenance in any plant. $188 and up. For details, write: PANGBORN CORPORATION, 2400 Pangborn Blvd., Hagerstown, Md.

Pangborn BLAST CLEANS CHEAPER with the right equipment for every job

50th Anniversary Medallion

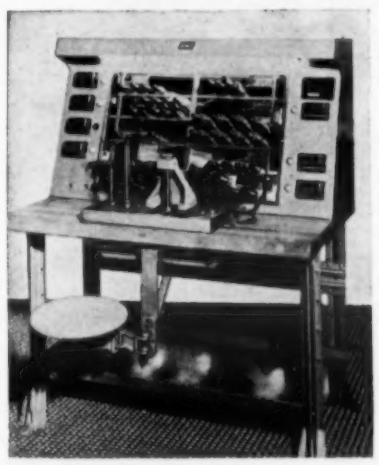
▲ For more details circle **NED-368 J4** on enclosed inquiry slip ▲

OVERLOAD METER
prevents tool breakage, work damage

Any condition of overload on motor driven equipment is detected by model L-122 Loadmeter, originally designed to detect only increased loads due to tool dulling. Adjusting of calibration dial for desired 100 per cent amperage can be performed by user in the shop. Unit has doughnut shaped transformer with 8-ft leads and is enclosed in moistureproof 16-gage steel box. Other features are built-in protection against starting surge currents, uniform needle deflection across dial and auxiliary red pointer to indicate per cent of load at which dull tools should be replaced. Models to set off alarms or shut off feed are available. Made by **Detroit Milling Cutter Co.**, 28625-6 Grand River Ave., Farmington, Mich.

▲ For more details circle **NED-369 J4** on enclosed inquiry slip ▲

TOOL CONTROL PANEL
automatically controls tool changes on multiple spindle machines



At - the - machine functions of presetting, storing and changing cutting tools are co-ordinated by Toolitrol tool control panel with automatic counting and signaling devices. Designed specially for each new or existing machine installation, panels are adaptable to round-the - table, single-end trunnion, double-end trunnion and various combinations of way-type machines and semistandard drill heads. Each machine station and spindle is represented by at least one corresponding station on this control unit, with a nameplate identifying tool sizes, station numbers, tool numbers and adapter sizes.

Tool panels are outlined in red and blue to indicate left and right-hand stations. To control tool changes automatically, counters are set for a predetermined number of machine cycles and a light signals the operator as to the particular tool or tools he should change. Surface plate with bushings for various adapters, is used for adjusting or presetting drills, reamers, taps and other cutting tools. Keyhole tool ejectors simplify work. Made by **Scully-Jones & Co.**, 1952 S. Rockwell St., Chicago 8, Ill.

▲ For more details circle **NED-370 J4** on enclosed inquiry slip ▲

When Contact Reliability is most important...

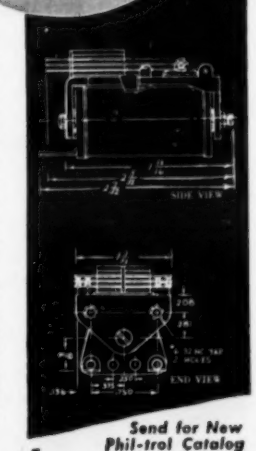
the NEW 8QA MULTI-CONTACT D.C. Phil-trol RELAY

Dependability plus high sensitivity have made this new Phil-trol relay an immediate favorite with engineers and designers. Compactness and adaptability provide new answers to problems confronting electronic and control engineers.

Features include immediate response; fast closing and opening; contact springs with twin contacts; heavy duty, long-life bronze bearings; light weight.

Like all standard Phil-trol relays, the 8QA is available in a wide range of modifications. Coils may be single or double wound, and equipped with copper slugs or sleeves for slow release or for slow operation.

Phil-trol engineering experience and design facilities are available to help you solve any new application problem.



Send for New Phil-trol Catalog NED

Phil-trol
IS THE REGISTERED TRADE MARK OF
PHILLIPS CONTROL CORP. • JOLIET, ILLINOIS
A THOR CORPORATION SUBSIDIARY • OFFICES IN ALL PRINCIPAL CITIES

▲ For more details circle **NED-371 J4** on enclosed inquiry slip ▲

modernize materials handling with CARGOTAINERS®

Cargotainers are designed to keep pace with modern methods of materials-handling because they are: 1. Sturdy and resistant to shock; 2. Readily folded when not in use; 3. Open mesh so that contents may easily be seen for quick inventory; 4. Efficiently designed for shipment, assembly line use, and vertical storage. Write for information concerning the new CLEARVIEW model with its exclusive foot construction for greater durability and better locking and stacking. Dept. NED, Pittsburgh Steel Products Co., Grant Bldg., Pittsburgh 30, Pa.

Pittsburgh Steel Products Company
A Subsidiary of Pittsburgh Steel Company

▲ For more details circle **NED-372 J4** on enclosed inquiry slip ▲

PETERS-DALTON Inc.

saves engineering, fabricating, and installation costs using PLATECOILS
REPLACES PIPE COIL

Peters-Dalton, Inc., Detroit, Michigan, has found it is less costly to buy Platecoils than to fabricate their own pipe coils. Platecoils are installed in a fraction of the time without the complicated racks needed for pipe coils. They have also simplified engineering and estimating. Considerable time is saved by the standard charts of sizes and capacities.

Send for complete technical manual and descriptive Bulletin No. P57.

PLATECOIL Division **Tranter Mfg. Inc.** LANSING 4, MICHIGAN

▲ For more details circle **NED-373 J4** on enclosed inquiry slip ▲

HEAT THAT MOVES AROUND

THE fact that the discharge outlets of WING Revolving Unit Heaters keep the heated air in constant, gentle motion is one of the reasons why nationally known firms like the Budd Company have installed them in their plants, both at Philadelphia and in the one shown in this photograph, at Gary, Indiana. The big blanking and forming presses in this great plant present a natural barrier to ordinary fixed discharge heating systems, but not to the moving streams of heated air from the WING Revolving Heaters, even suspended, as they must be, far above the floor, to clear the cranes. That is equally true in the summer time when, with steam turned off, the cooling breezes from the revolving discharge outlets keep workers comfortable on the hottest days. Investigate. Write for Bulletin HR-6.

L. J. Wing Mfg. Co.
165 Vreeland Mills Road
Linden, N. J.

Factories: Linden, N. J. & Montreal, Canada In Europe: Etab Wanson, Brussels, Belgium

▲ For more details circle **NED-374 J4** on enclosed inquiry slip ▲

6 STEPS to GREATER ABRASIVE SAVINGS

There are 6 important reasons why abrasive blast cleaning costs have hit a new low with the introduction of Wheelabrator Steel Shot. Combining high hardness with long life, this electric furnace steel shot not only cleans faster but lasts longer than other abrasives. It provides greater coverage, insures uniform results and cuts maintenance costs. It has the plus features of 50 lb. carton packaging and palletized shipments to save handling time and storage space. Send today for Bulletin 89-A for the full story.

American WHEELABRATOR & EQUIPMENT CORP. — WHEELABRATOR STEEL SHOT

508 S. Byrkit St., Mishawaka, Indiana

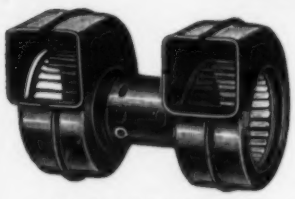
▲ For more details circle NED-375 J4 on enclosed inquiry slip ▲

WE'LL SEND YOU THIS WHOLESALE CATALOG FREE!

Save Money

OVER 9,000 ITEMS INCLUDING

This special **CLOSEOUT Buy!**



Redmond 200 CFM Double Blower

Made of heavy gauge steel, with 4¾" Torrington carefully balanced airotors delivering 200 Cu. Ft. per Min. Has 115 V, 60 C, 90 Watt, 1450 RPM type L double shaft rubber mounted motor.

53431 Each **$7.49** 6 Lots Each **$7.19**

Mounting Flanges

Steel 4¾" square flanges for mounting blower.

42764 Each **30c**

This Offer Subject to Prior Sale

THE HARRY ALTER CO.
1726 S. MICHIGAN AVE., CHICAGO 16
132 LAFAYETTE ST., NEW YORK 13

▲ For more details circle NED-376 J4 on enclosed inquiry slip ▲

Enjoy THE ADVANTAGES OF HAVING TIME RECORDED

ACCURATELY
AUTOMATICALLY
EFFICIENTLY

THE NEW *Simplex* TIME RECORDER

This new Simplex Time Recorder figures payrolls easier, 50% faster—cuts payroll costs in half.

Vertical or horizontal print . . . Two color registration . . . Trigger-touch print . . . Direct subtraction . . . One-minute positioning . . . Attractive, indestructible case.

SIMPLEX TIME RECORDER CO., Gardner, Mass., Dept. N-107
Please give us more information on:

☐ Cost Recorder ☐ Time Cards ☐ Electric Time Stamp
☐ Watchman's Clock ☐ Time Card Files ☐ Time Card Racks

Firm.....
Name.....
Street & No.....
City..... State.....

▲ For more details circle NED-377 J4 on enclosed inquiry slip ▲

TWO-WAY BAND SAW
usable horizontally or upright

No tools are required to change the model 49A dual purpose metal cutting band saw from horizontal to vertical service. By swinging its cutting head into a vertical position it can be used as a utility upright band saw for cutting slots, angles, bevels, notches or contour work. As a horizontal saw, it has a rectangular capacity of 3½ x 6 in. and a round capacity of 3½ in. The ½ x 0.025-in. x 5 ft blade is driven by a ¼-hp 115 v motor. Saw has automatic shut-off at the end of each cut; V-belt drive with speeds of 54, 100 and 190 fpm, and screw type vise. Made by **Wells Mfg. Co.**, 1313 Harding St., Three Rivers, Mich.

▲ For more details circle NED-378 J4 on enclosed inquiry slip ▲

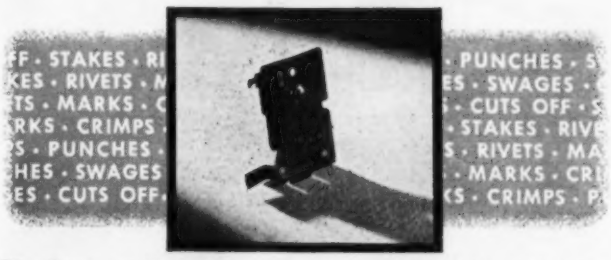
RIDER TYPE PALLET TRUCK
operates in 5 and 6-ft aisles and will move 4000-lb load at 4 mph

Pallet handling in 5 and 6-ft aisles is possible with the Warehouser RP-4 electric rider type low-lift truck capable of handling loads up to 4000 lb. Truck has pallet fork lift of 4 in. and lift time is 5 seconds at full load. Overall spreads of pallet forks are in standard widths of 25, 27, 30 and 36 in. Fork lengths are available from 36 to 60 in. in steps of 6 in. Truck has three speeds forward and reverse. Rate of travel, no load, is 5¼ mph; with full load, 4 mph.

Steering is through spur geared reduction to drive with arc of steer over 200 degrees. Spring loaded dual caster wheels assure four-point contact even on uneven floors. Drive is totally enclosed double reduction spur geared unit directly connected to drive axle. Gear train operates in oil bath with all rotating parts mounted on ball bearings. Deadman safety control treadle cuts power and applies brakes when operator leaves truck. Made by **Yale & Towne Mfg. Co.**, Dept. M-1, Roosevelt Blvd. & Haldeman Ave., Philadelphia 15, Pa.

▲ For more details circle NED-379 J4 on enclosed inquiry slip ▲

ELECTROSTAKE CUTS COSTS
at Eastman Kodak



The Eastman Kodak Company uses ELECTROSTAKE—the automatic solenoid-operated staking machine—to stake shutter parts for Brownie Hawkeye cameras. ELECTROSTAKE presses the assemblies together—then *automatically* delivers the staking blow. Better control of the impact cuts scrap . . . and because ELECTROSTAKE is faster and simpler to use, operators are able to stake far more shutter parts than they could on foot-powered machines.

Delivers impacts up to 3500 lbs.—hold-down pressure can be pre-set from 0 to 20 lbs. Economical to buy, operate and maintain. Plugs into any 115 V., A.C. outlet.

Write — or phone Bigelow 4-6370 — for folder showing complete line of Black & Webster electric production tools.

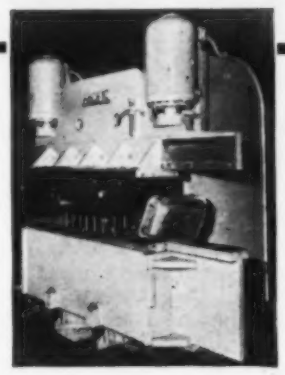
BLACK & WEBSTER, INC.

Dept. 1, 445 Watertown Street, Newton 58, Mass.
Solenoid-operated Production Tools

▲ For more details circle NED-380 J4 on enclosed inquiry slip ▲

TWO PRESSES for the PRICE OF ONE . . .

A DEEP DRAW PRESS — A PRESS BRAKE



This 100 ton PACIFIC HYDRAULIC PRESS BRAKE is unique as a draw press because it provides a maximum of accessible working space without corner strain rods. It also can be easily converted to a press brake in less than ten minutes by removing the upper platens. As a press brake, it incorporates all of the advantages of "The Pacific" — the first really safe brake. It can't be jammed — the stroke is infinitely adjustable from ⅛" to 10" with full tonnage available throughout the stroke — It accurately straightens and air bends — It is designed for heavy punching and blanking at any point along the bed.

PACIFIC HYDRAULIC PRESS BRAKES have proved themselves by years of daily operation throughout the World.

Sales and service available in all major cities of the United States. Call us for assistance in supplying a machine to fit your special needs.

PACIFIC INDUSTRIAL MFG. CO.
848 - 49th Avenue - Oakland, Calif.

▲ For more details circle NED-381 J4 on enclosed inquiry slip ▲

UP! UP! UP!
TO ANY DESIRED HEIGHT

EASILY . . .
SAFELY . . .
ECONOMICALLY

HI-LIFT
EXTENSION
SCAFFOLD

Models extend from 6 ft. 10 in. (can be made lower) to any desired height. Hand or electrically operated. Comes to you ready for work — no erection required, no loose parts. Built to meet individual requirements. Ideal for painting, lighting, cleaning, and all overhead maintenance. Pays for itself in time and labor saving.

MOST VERSATILE SCAFFOLD ON THE MARKET

Set up in aisles and work on both sides.

Resting on roof trusses.

Over machines in factories, in warehouses, bank cages, etc.

Straddle seats in theaters, auditoriums, etc.

Write for Complete Literature

ATLAS INDUSTRIAL CORP.
853 - 39th Street
Brooklyn 32, N. Y.

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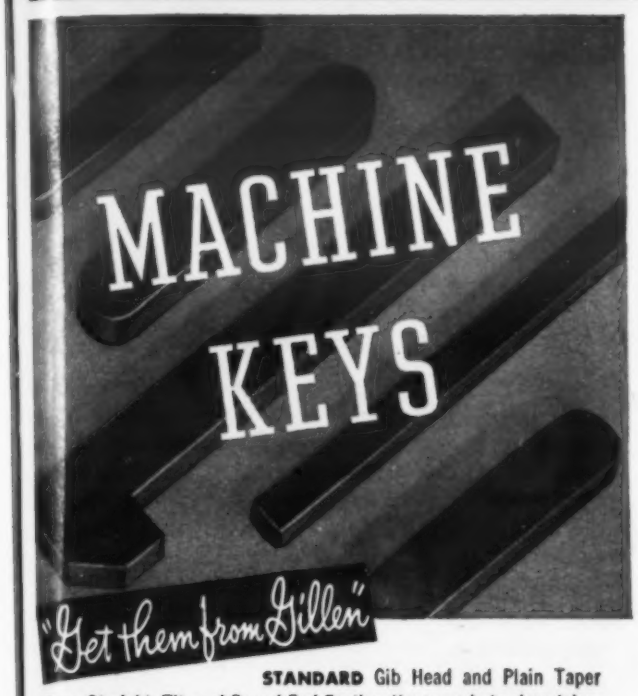

STANDARD Gib Head and Plain Taper Keys, Straight, Tit, and Round End Feather Keys, made to close tolerances. Also special types and sizes quickly made to specifications. Write for catalog or send your blueprints for quotation.

John Gillen Company INC

2562 S. 50th Ave., Cicero 50, Ill.

GROOVE PINS • MACHINE KEYS • TAPER PINS • MACHINE PARTS • WOODRUFF KEYS

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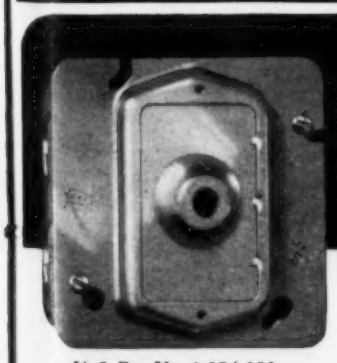
PROTECT EXPENSIVE GAGES

SPRAGUE SHUT OFF VALVES automatically cut out gages and other pressure-sensitive instruments when fluid pressures go beyond their operating limits. Automatically open when pressure is again within approx. 80% of set cut-out points. Available for any pressure setting between 10 PSI. and 5000 PSI. Save valuable man hours. Eliminate opening and closing manually operated shut off valves. Supplied with standard pipe thread connections, also available with AN tube fittings. Body is 1½" aluminum hexagon stock. Length 5½". Bronze or stainless steel bodies also available. Easy to install. Thousands in use. Write for bulletin.

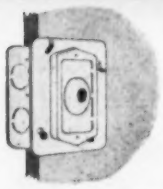
SPRAGUE
Engineering and Sales Corp.
1144 WEST 135TH STREET, GARDENA, CALIFORNIA

▲ For more details circle **NED-384 J4** on enclosed inquiry slip ▲



NEW! RACO LOCATOR COVER

U. S. Pat. No. 2,574,382

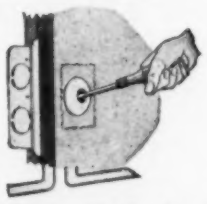


Cover with Locator KO installed. Opening protected and location marked.

This new Raco Locator KO feature is an integral part of the device ring. It makes outlet boxes easy to find when hidden by plaster. Keeps boxes clean and prevents plaster cracking about box. Wiring and device installation can be done at once. You avoid all plaster problems with the Raco Locator cover.

•

Write for Complete Information.

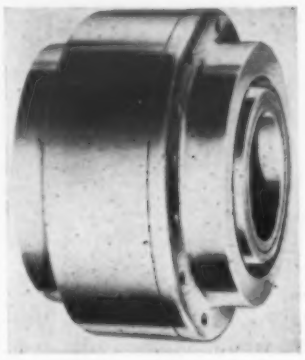


Bend Locator KO back and forth until ties are broken. Then remove KO. Box is free of debris.

RACO
ALL-STEEL EQUIPMENT INC., Aurora, Ill.

▲ For more details circle **NED-385 J4** on enclosed inquiry slip ▲

LARGE BORE CLUTCHES perform on sprag principle



Series of large bore clutches for over-running, indexing and backstopping is available with bores up to 12 in. Operating on the sprag principle, they provide instantaneous engagement and are made with ball bearings for smooth and easy over-running. Made by **Formsprag Co.,** 23595 Hoover Rd., Van Dyke, Mich.

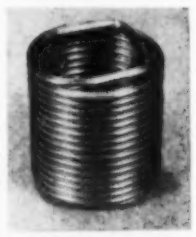
▲ For more details circle **NED-386 J4** on enclosed inquiry slip ▲

COPYING MACHINE operates at 12 ft per minute

Series 100 Copyflex copying machine is based on the diazo direct copying process and operates at a speed of 12 ft per minute. It will print up to 11-in. wide. Machine makes positive copies directly from the original of anything written, drawn, printed or typed on ordinary translucent paper. Machine needs only to be plugged in to standard 115-v circuit. It is compact and designed for tabletop use. Made by **Charles Bruning Co.,** Dept. NE15, 4700 Montrose Ave., Chicago 41, Ill.

▲ For more details circle **NED-387 J4** on enclosed inquiry slip ▲

SCREW THREAD INSERTS have automatic locking design

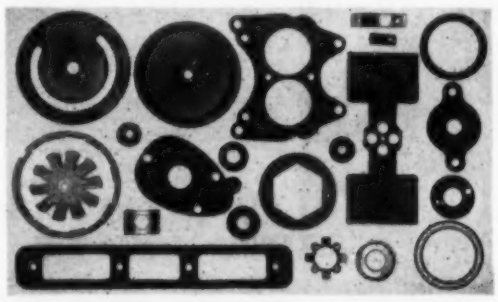


Grip-end screw thread inserts automatically lock themselves into the parent metal, lock screws against vibration and provide a high-strength thread. They are formed of 18-8 stainless steel wire for use in such materials as aluminum, magnesium and plastics and are available at present in 10-32 and ¼-28 sizes. Inserts have a constricting area in the bottom coil which grips the screws. Locked screws can be freed as required by applying breakaway torque approximately the same as torque used in making the original assembly. Inserts meet AN-N5B and similar specification locknut torque requirements and are suitable for elevated temperature work. Made by **Heli-Coil Corp.,** 14765 Shelter Rock Lane, Danbury, Conn.

▲ For more details circle **NED-388 J4** on enclosed inquiry slip ▲

GOT A PRODUCTION OR DESIGN PROBLEM?

• GASKETS • PACKINGS • WASHERS • SEALS • SHIMS • BUSHINGS • "O" RINGS



80 YEARS OF AUBURN "KNOW HOW" HAS THE ANSWERS!

Yes . . . over 80 years experience in engineering, designing, fabricating and production qualifies Auburn to help you find the ideal answer to your problem. Where gaskets, washers, and other sealing devices are concerned, Auburn engineers are tops in the field. Their know-how is yours—for the asking. We are tooled to fabricate in virtually any material:

Leather, Asbestos, Teflon, Silicone Rubber, Neoprene, Rubber, Cork, Fibre Compositions, Phenolics, Felt, Cloth, Paper, Cardboard, Plastics, Brass, Steel, Copper, Aluminum, Other Special Materials.

Send us your specifications or blueprints. You'll receive quotations, recommendations without obligation.

AUBURN MANUFACTURING COMPANY

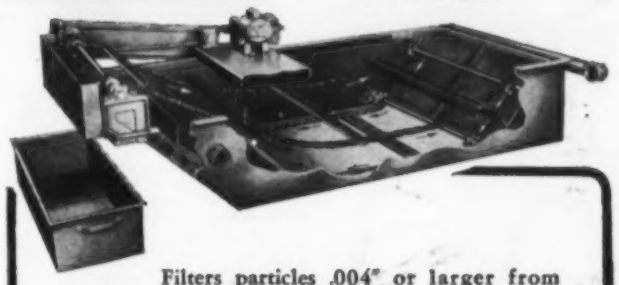
304 Stack St., Middletown, Conn.

Representatives: Atlanta, Ga.; Detroit, Mich.; St. Louis, Mo.; Los Angeles, Cal.; Minneapolis, Minn.; Washington, D. C.; Cincinnati, O.

▲ For more details circle **NED-389 J4** on enclosed inquiry slip ▲

New! *Filters Small Solids...*

Delpark Settling and Filter SYSTEM



Filters particles .004" or larger from liquids of varying viscosity containing solids of different particle sizes and weights.

Power-driven expeller flights, solid and of special bristle brushes, sweep solids from the screen and settling area up a ramp at the opposite end. A special cleaning device removes the solids from the flights before their return to the filter. Screens easily removed for manual cleaning. A blank metal sheet replaces the screen during cleaning.

WRITE FOR NEW BULLETIN

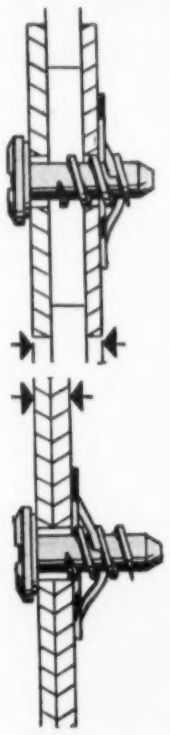
INDUSTRIAL FILTRATION COMPANY
14 INDUSTRIAL AVE. LEBANON, INDIANA

▲ For more details circle **NED-390 J4** on enclosed inquiry slip ▲

Why change cowl fastener size every time tolerances vary .010" ?

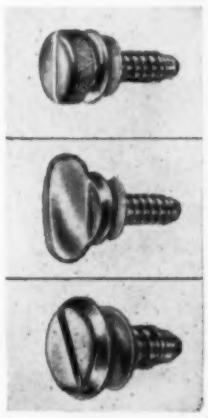
SOUTHCO quick release fasteners

PROVIDE ± TOLERANCES AS REQUIRED



Industrial tolerances, provided only by Southco Quick-Release Fasteners, are designed to accommodate variations in thickness normally encountered in metal working. No longer is it necessary to call out a different size precision type fastener because of a few thousandths variation. You eliminate a serious stock problem and reduce assembly time when you specify SOUTHCO.

You can easily choose the right Southco Quick-Release Fastener from a wide variety of stock sizes which include two diameters and three head styles.



The Southco Handbook makes it easy to pick the proper fastener. Write for your copy today. Southco Division, South Chester Corporation, 243 Industrial Highway, Lester, Pa.

© 1954

SOUTHCO DIVISION
SOUTH CHESTER CORPORATION
243 Industrial Highway, Lester, Pa.

Please send me, without cost, the 24 page SOUTHCO FASTENER HANDBOOK ☐
Please have representative call ☐

NAME_____
POSITION_____
COMPANY_____
ADDRESS_____
CITY_____ ZONE_____ STATE_____

▲ For more details circle **NED-391 J4** on enclosed inquiry slip ▲

CUT COSTS . . . FASTEN "ON THE DOUBLE" with the Chicago "214" DOUBLE RIVET SETTER

The "214" automatically feeds, inserts and clinches two rivets at a time . . . with speed that may mean a big saving in your fastening costs.

14" throat makes large assemblies easy to handle. For up to 9/64" diameter steel tubular rivets—lengths to 7/8". Quick Change Rotary Type Hoppers and Raceways permit a 5-minute changeover to rivets of different size. Adjustable anvils and riveting centers add to its versatility.

Ask us how the "214" can help you cut costs. Send a sample of your problem assembly (or blueprint) for a Free fastening analysis.

FREE CATALOG contains valuable engineering information and rivet specifications plus illustrated descriptions of 26 Chicago Automatic Rivet Setters.

Chicago Rivet & MACHINE CO.
9606 West Jackson Boulevard, Bellwood (Chicago Suburb) Illinois
Branch Factory: Tyrone, Pa.

▲ For more details circle NED-392 J4 on enclosed inquiry slip ▲

Get TUFF-TEX for floors that get a bang out of production!

The thump and vibration of heavy machines . . . the constant flow of plant traffic . . . calls for heavy-duty flooring like Tuff-Tex* *Greaseproof* Industrial Tile.

Lubricating oils, grease, metal chips can't hurt Tuff-Tex.

Available in many handsome colors, Tuff-Tex offers unusual versatility of design . . . both decorative and functional.

Send for Tuff-Tex folder or call in your Tile-Tex* contractor, listed in the classified pages of your phone book.

THE TILE-TEX DIVISION, The Flintkote Company, 1234 McKinley Street, Chicago Heights, Illinois

Tile-Tex—Pioneer Division, The Flintkote Company, P. O. Box 2218, Terminal Annex, Los Angeles 54, California

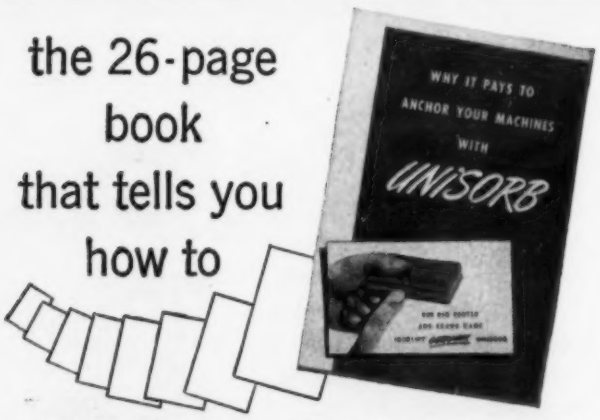
The Flintkote Company of Canada, Ltd., 30th Street, Long Branch, Toronto, Canada

*REG. U. S. PAT. OFF.

TUFF-TEX GREASEPROOF INDUSTRIAL TILE

▲ For more details circle NED-393 J4 on enclosed inquiry slip ▲

the 26-page book that tells you how to



- ANCHOR MACHINES and eliminate 60-85% of transmitted vibration
- ELIMINATE DRILLING of wood or concrete floors when installing machines
- SAVE TIME and money (up to 30%) on installation costs

For your copy of this valuable book, showing actual plant installations of UNISORB®, return the coupon today.

the FELTERS company
224 South Street, Boston 11, Mass.

Please send me a copy of FACTS ABOUT ANCHORING YOUR MACHINES WITH UNISORB, at no obligation to me.

Name.....Title.....
(Please print)
Company.....
Address.....
City.....Zone.....State.....

Return to: The Felters Co., 224 South St., Boston 11, Mass.

▲ For more details circle NED-394 J4 on enclosed inquiry slip ▲

DRILL JIG VISE
top plate swings away for loading

Top plate of this Lift Swing drill jig vise swings out of way to permit fast loading and unloading and easy inspection of part. Alignment of top plate is by means of two hardened bushings which slide over stationary guide pins. Taper wedge locking mechanism locks at four different locations. Back of fixture has two ribs machined square with lower base so that unit can be set on its back for drilling in a plane 90 degrees from original set up. Available double top plate, when swung 180 degrees, facilitates drilling two holes side by side. Center post vise on which plate rises and folds back out of way, is also offered for handling larger work pieces. Made by **Accurate Bushing Co.**, 443 North Ave., Garwood, N. J.

▲ For more details circle NED-395 J4 on enclosed inquiry slip ▲

FOOT-CONTROLLED RHEOSTAT
provides five resistance steps

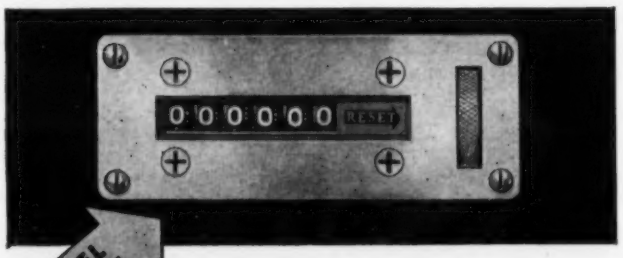
Both foot or knee control models are available in the Temco 2100 series rheostat designed as a low, flat companion to 1032 series of upright models. Controls utilize same nichrome element as latter series. Five resistance steps are provided in addition to "off" and "full speed" positions. Made by **Electrical Mfg. Co.**, 407 Lake Ave., Racine 1, Wis.

▲ For more details circle NED-396 J4 on enclosed inquiry slip ▲

SLIDING DOOR LOCK
locks door open or closed

Sliding door lock has a double locking bolt to lock doors in open or closed position. Handle moves to right or left for lifting striker bolt from the locked position. Lock is interchangeable for left or right hand operation and is made of stamped steel. It is 1⅛-in. thick and measures 4½-in. center to center of holes in top and bottom flanges. A ½-in. offset permits inside installation without extending lock beyond edge of door. Made by **A. L. Hansen Mfg. Co.**, 5164 Ravenswood Ave., Chicago 40, Ill.

▲ For more details circle NED-397 J4 on enclosed inquiry slip ▲



PANEL MOUNT

MODEL "Y" ELECTRIC PRODUCTIMETER
on the MACHINE or at CONTROL CENTER

The flexibility of the Model "Y" Electric Productimeter offers versatility of application to suit individual needs. Panel mounts grouped at control center give immediate production figures of many machines in different plant departments. Operates accurately over wide current fluctuations. Totally enclosed.

Hi-Speed, Compact, Accurate, Durable. Adaptable to panel or base mounting.

Send for Catalog No. 55

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1922 N. Buffum St. Milwaukee 1, Wis.
122 S. Water St. Providence 3, R. I.
Representatives in Principal Cities

PRODUCTIMETERS Count Everything 75th ANNIVERSARY

▲ For more details circle NED-398 J4 on enclosed inquiry slip ▲

THE SCHRAMM Pneumatractor

CAN

PUSH — front end loader with bucket (illustrated), or angle dozer blade, rotary sweeper, snow plows, etc.

PULL — anything a wheel tractor will, with either front or rear winch.

POWER — any hydraulically, mechanically and pneumatically operated equipment such as back hoe (illustrated), post hole digger, scaffold boom, etc.

PROVIDE AIR — for any pneumatic tools that can be operated from a 125 C.F.M. AIR COMPRESSOR.

SCHRAMM INC.
The Compressor People · WEST CHESTER · PENNSYLVANIA

SCHRAMM AIR COMPRESSORS

▲ For more details circle NED-399 J4 on enclosed inquiry slip ▲

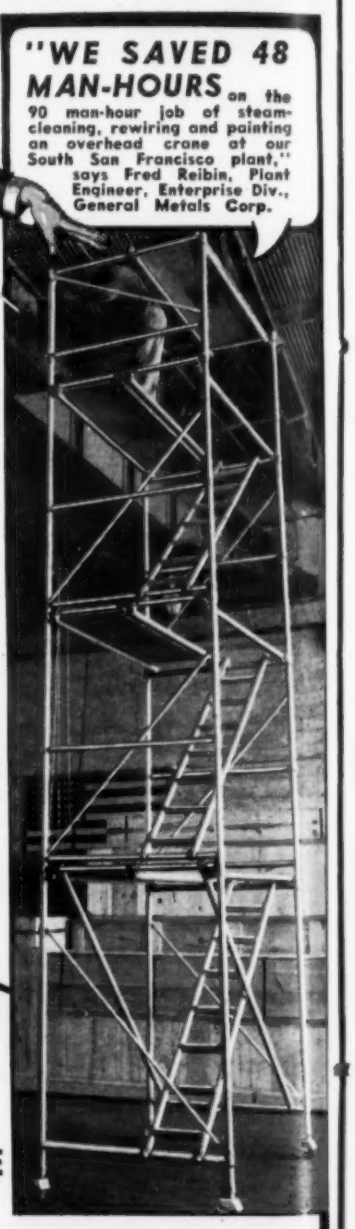
Presto . . . it's UP!

"WE SAVED 48 MAN-HOURS on the 90 man-hour job of steam-cleaning, rewiring and painting an overhead crane at our South San Francisco plant," says Fred Reibin, Plant Engineer, Enterprise Div., General Metals Corp.

25 ft. "UP-RIGHT" SCAFFOLD-ON-WHEELS

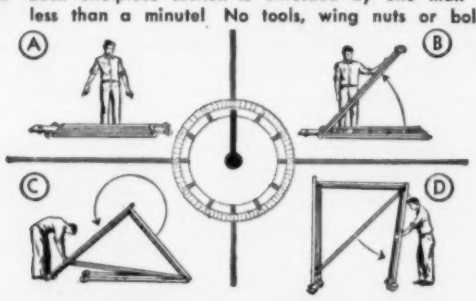
Set up in only 5 minutes!

As if by magic, an aluminum alloy tower of any height desired is ready in minutes! Individual scaffold sections are set one on top of the other. Sections lock into place instantly. The tower rolls down aisles . . . straddles machinery.



HERE'S THE SECRET! . . . Patented ONE-PIECE SECTIONS

Each one-piece section is unfolded by one man in less than a minute! No tools, wing nuts or bolts.



WRITE FOR DESCRIPTIVE BULLETIN

"UP-RIGHT" SCAFFOLDS
DEPARTMENT 141 • 1013 PARDEE STREET • BERKELEY, CALIFORNIA
Factories: Berkeley, Calif. and Teterboro, N. J.
Offices in all principal cities

▲ For more details circle NED-400 J4 on enclosed inquiry slip ▲

Wolverine

Heavy Duty QUICK ACTION TOGGLE CLAMPS

Extra CLEARANCE
Extra SPEED

Rugged construction—drop forgings, cast steel and solid bar stock.

• • •

Wolverine Toggle Clamps also available in several types and sizes of Standard Action and Push Action units.

• • •

Wolverine Clamps are in use in almost every major industrial field and are specified by prominent engineering firms. Write for Bulletin.

WOLVERINE TOOL CO.
1482 E. WOODBRIDGE
DETROIT 7, MICHIGAN

For more details circle NED-401 J4 on enclosed inquiry slip

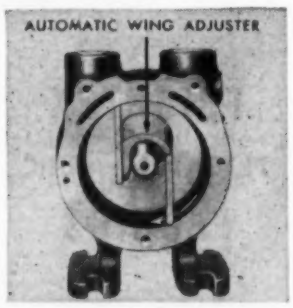
When it has to Run for Years and Years

WITHOUT FAILURE

MAKE IT A LEIMAN VACUUM AND PRESSURE PUMP

Leiman users say this:
"Almost continuous operation, 24 hours a day for 21 years"
"Using Leiman pumps on 350 machines. No pump has given a moment's trouble"

4-WING TYPE. Vacuums to 20"; pressures to 15 lbs.; displacement to 162 cfm. Wings take up their own wear, insure positive pressure or vacuum.



2-WING TYPE. Vacuums to 29.9"; pressures to 25 lbs.; displacement to 40.8 cfm. Automatic wing adjuster forces steel blades to meet cylinder wall, no sticking.

Write for 16-page catalog and blueprints of typical applications on Leiman rotary positive pumps—choice of industry since 1889.

SEE OUR CATALOG IN SWEETS FILE

LEIMAN BROS., INC.
167 Christie Street, Newark 5, N. J.

For more details circle NED-402 J4 on enclosed inquiry slip

CHICAGO TRAMRAIL

JIB CRANES

FASTER HANDLING
at less cost

- 360° Swing • Self-Supporting
- Capacities from ½ ton to 5 tons
- Complete Line of Pillar, Mast and Wall Type Jib Cranes

Write for Catalog

CHICAGO TRAMRAIL CORPORATION
4000 West Washington Boulevard • Chicago 24, Illinois
OVER HEAD CRANES • STAK-RAK CRANES
MONORAIL SYSTEMS AND RACKS

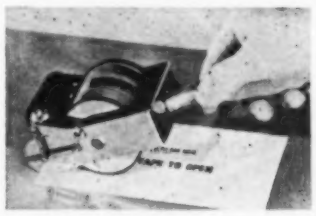
For more details circle NED-403 J4 on enclosed inquiry slip

EXPANSION JOINTS
available in ½ to 6-in. pipe sizes

Capable of handling up to 150 psi steam at temperatures from −65 to 500° F, expansion joints are available in all pipe thread sizes from ½ to 6 in. inclusive. Spring seated seal is made from Teflon and ball seats and the inside of the joint tube are hard chrome plated. Ball seats permit deflection or twisting of the pipe to be accommodated. Total permissible eccentricity is 10 per cent on each end of the joint. Joints can be made of steel, stainless steel or bronze. Made by **Rotherm Engineering Corp.**, 7280 W. Devon Ave., Chicago 31, Ill.

For more details circle NED-404 J4 on enclosed inquiry slip

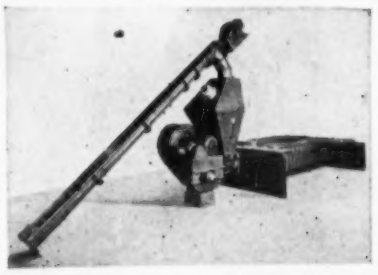
MARKING ROLLER
uses interchangeable type



Fast economical marking of shipping cartons, sheet metal, towels, rubber goods and other curved or flat surfaces is possible with Roll-A-Matic marking roller. It consists of a self-inked printing wheel with spring return and handle which accepts interchangeable type. Various inks will mark a wide variety of materials. Tool weighs only 23 oz. Metal parts are of cadmium plated steel and ink rollers are of high quality felt. Several thousand impressions are claimed for a single inking. Made by **DRI-flo**, 644 E. Ten Mile Rd., Hazel Park, Mich.

For more details circle NED-405 J4 on enclosed inquiry slip

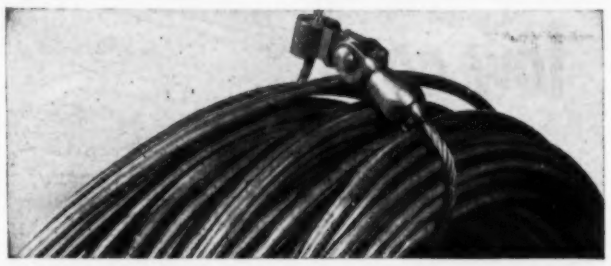
PACKAGED STOKING UNIT
is dust-free and fully automatic



Package Bin-Fed Ramfeed coal stoking unit conveys coal direct from coal storage to furnace without manual attention. It is dust-free and, when equipped with bin level controls, will automatically start when hopper is empty and stop when hopper is full. Coal flow is prorated by controls according to steam demand. Removal of ashes once or twice a day is only attention necessary. Unit can be installed from front, side or rear of boiler, depending on bin location. Combinations of horizontal and inclined conveyors can be supplied where two or more hoppers must be supplied. Made by **Canton Stoker Corp.**, 201 Andrew Pl. S.W., Canton 1, O.

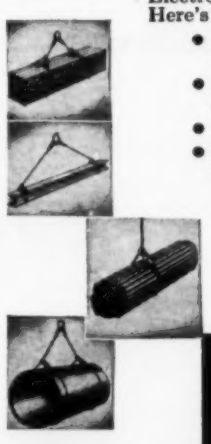
For more details circle NED-406 J4 on enclosed inquiry slip

ELECTROLINE CHOKER SLING FITTING ADJUSTS AUTOMATICALLY TO ANY ANGLE OF PULL



For prolonging wire rope life, ease of attachment and complete safety, this revolutionary Electroline Choker Sling Fitting tops them all. Here's why:

- pivoted members adjust automatically *to any load*—they take the bend, instead of the rope.
- can't disengage under tension, or shock, the fitting always engages the rope.
- easy to apply—goes on in seconds, saves time.
- the Electroline Choker Sling Fitting outlives the rope it protects, reuse it over and over again.



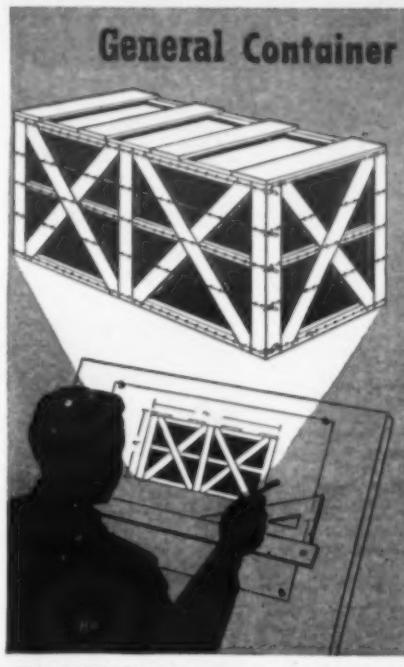
A time and labor saver—in mills, factories, docks, material yards, warehouses: Wherever wire rope choker slings are used.

Send for bulletin "King of Sling Fittings"—which tells all.

Electroline Company
4121 South La Salle Street
CHICAGO 9, ILLINOIS
In Canada: Powerlite Devices, Ltd., Toronto

For more details circle NED-407 J4 on enclosed inquiry slip

General Container Engineering



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ENGINEERED CONTAINERS FOR EVERY SHIPPING NEED

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1859 Miner Street, Des Plaines, Illinois

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"WANT TO TEST WEAR RESISTANCE?"

ABRASION TESTER

- SIMULATES ACTUAL WEAR CONDITIONS
- FOR PLASTICS, RUBBER, TEXTILES, PAINTS, LINOLEUM
- GIVES ACCURATE NUMERICAL REPORT

The Model 140 Taber Abraser is recognized the world over as the STANDARD for testing the wear resistance of plastics, rubber, textiles, linoleum, paint and other protective coatings. Anyone can make a scientific, wet or dry, comparative abrasion resistance test by merely inserting sample in instrument and taking numerical reading from dial. Send coupon below for descriptive literature.

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Tests quality of plastic material and plastic coated surfaces to resist scratches, digs, scrapes and other physical damage not classed as normal wear. Handles specimens from thin plate to 1/4" thickness. Used everywhere for precision perfect tests.

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Determines both INITIAL and NORMAL stiffness of sheet and wire specimens in *eight* test ranges and gives report from DIRECT READING. Precision shear cuts exact specimens from paper or plastic (up to 20 pt.) to eliminate possible variation in results.

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For more details circle NED-409 J4 on enclosed inquiry slip

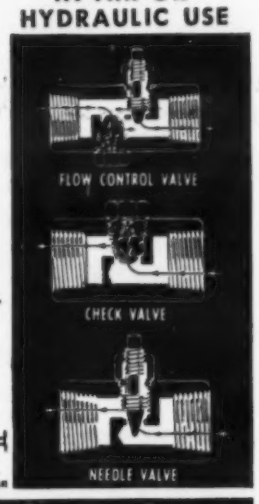
Get Easier, More Accurate Cylinder Speed Control

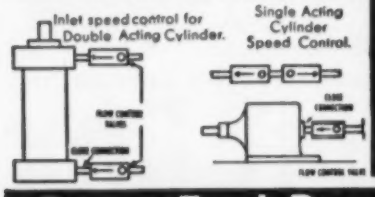
with **Pneu-Trol** VALVES IN AIR OR HYDRAULIC USE

2000 and 5000 (steel) P.S.I.

Pneu-Trol Valves combine in a short, compact body, a tapered fine thread needle for extremely accurate air or oil flow control and a floating retro ball check, which permits full flow in the opposite direction. Retro ball floats in most sensitive position to seat, requiring only a slight differential pressure to fully open or close it. Check Valve and Needle Valve incorporate single function features of Flow Control Valve. All valves available in 5 female pipe sizes — 1/8" to 3/4". Valve bodies are made from brass, aluminum, steel or stainless steel. Attractive Prices — Immediate Delivery.

Write for Illustrated Circular and Price List.





Pneu-Trol Devices, Inc.
1436 N. Keating Ave., Chicago 51, Ill.

For more details circle NED-410 J4 on enclosed inquiry slip

the where when why how of gas unit heater applications

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Selecting the Right Heaters
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Reznor Heater Features, Construction Details and Specifications
Unit Heater Coverage
Unit Heater Location
Temperature Controls
Venting
Computing Gas Line Requirements

compiled for you by the manufacturer of the world's largest-selling gas unit heater

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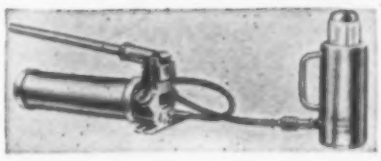
REZNOR MANUFACTURING COMPANY
41 UNION ST., MERCER, PA.

REZNOR THE WORLD'S LARGEST-SELLING GAS UNIT **HEATERS**

For more details circle NED-411 J4 on enclosed inquiry slip

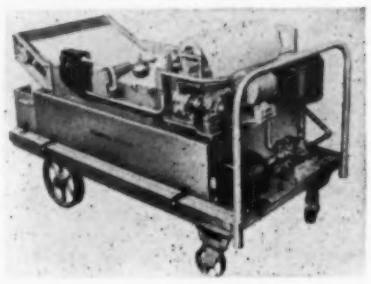
HYDRAULIC JACK
50-ton unit is remote-controlled



Hydraulic ram, high-pressure connecting hose and pump comprise 50-ton remote-controlled jack which can be used in confined quarters. Use can be as a hydraulic press or for lifting and lowering heavy machinery, lifting and aligning beams and straightening equipment. Minimum ram height is 10½-in. and lift is 5½-in. Automatic switch-over allows rapid positioning of unloaded ram and low speed, power pumping when ram lifts load. Safety by-pass valve prevents over-loading. Made by **Templeton, Kenly & Co.**, 2557 Gardner Rd., Broadview, Ill.

For more details circle NED-412 J4 on enclosed inquiry slip

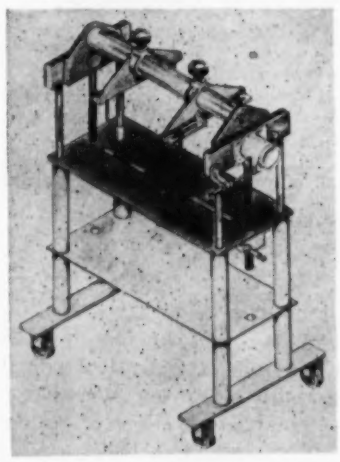
PORTABLE FILTRATION KIT
for conditioning liquids and oils



Caster - mounted portable filtration unit is equipped with a Delpark disposable belt - type filter. It is easily transported for periodic filtration of various liquids and oils. A variety of media can be used for numerous requirements including quenching oils, cutting oils, coolants, hydraulic oils, test stand oils and others. Made by **Industrial Filtration Co.**, Dept. SS-203, Lebanon, Ind.

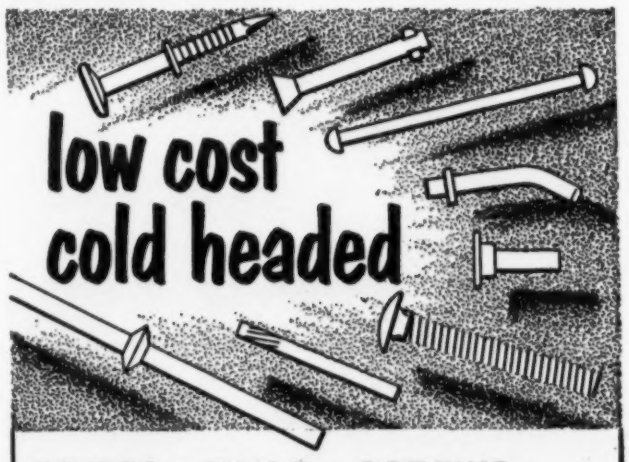
For more details circle NED-413 J4 on enclosed inquiry slip

DIE HANDLER
accommodates 18 x 24-in. dies



Portable low cost model 1016 die handler holds the top section of a die by means of clamps which give access to any screws on the top which hold punches or segments. Die is separated by an elevating crank. After separation, top section of the die may be revolved 360 degrees. Locking in zero position by pins permits light tryout of the die which can measure as large as 18 x 24 in. Made by **Hansford Mfg. Corp.**, 1237 University Ave., Rochester 7, N. Y.

For more details circle NED-414 J4 on enclosed inquiry slip

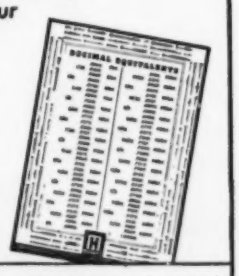


low cost cold headed

RIVETS • NAILS • SCREWS • FASTENERS • PARTS

. . . these are a Hassall specialty. Any metal, any finish, any size to 3/8" diameter and up to 7" long. *May we quote on your requirements?*

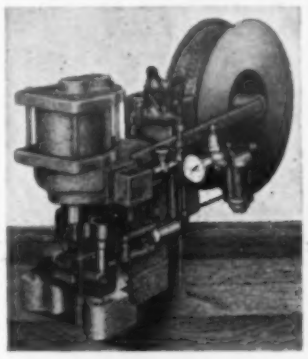
FREE DECIMAL WALL CHART
. . . this big, easy to read Decimal Equivalent Wall Chart is also a Hassall specialty. It's yours, free for the asking and no obligation.



JOHN HASSALL, INC., P. O. BOX 2178 Westbury, L. I., N. Y.

For more details circle NED-415 J4 on enclosed inquiry slip

FAST, COST-CUTTING TERMINAL ATTACHING on NEW "P-M"
advanced design



COLD CRIMPING MACHINE

Advanced design of new P-M automatic terminal attaching machine provides many improvements that drastically reduce tool set-up time and production lag. Interchangeable rolling tools are quickly set up in special die-set fully accessible in machine, and removable for faster tool changing on bench. Extra die-sets keep tools set up for quick job change-over.

Using strip terminals in continuous form supplied on nonreturnable reels, the machine automatically crimps and cuts off in one operation to produce fast, efficient, economical terminations. Engineered for rugged, continuous operation. Requires minimum production space. Simple, quiet air pressure operation. Modern color scheme and design innovations promote operator acceptance and minimize operational fatigue.

Low priced for short or long runs, P-M machine is sold outright with set of rolling tools ready for operation. Illustrated catalog of standard strip terminals, with full specifications, available when requested on company letterhead.

PATTON - MacGUYER CO.
16 Virginia Avenue . . . Providence R. I.

For more details circle NED-416 J4 on enclosed inquiry slip

FABRICS & TAPES For ALL INDUSTRY

FLIGHTEX FLIGHTEX FABRIC **FABRICS**

• COTTON
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If you use special industrial fabrics and mechanical tapes, you'll find Flightex a dependable source of supply. Our staff of engineers is at your service to help solve your fabric and tape problems.

Write for Complete Information

FLIGHTEX FABRICS, Inc.
91 Worth Street New York 13, N. Y.

For more details circle NED-417 J4 on enclosed inquiry slip

Dust-Eater

Parker Turbo-Sweep model for Quick, Cleaner Floor Maintenance

Revolutionary new design gives all the benefits of dust-free power sweeping . . . plus the traditional maneuverability, easy maintenance and low cost of Parker's other manual and motorized models.

Dust bag and trash hopper are easily emptied; hand-high controls adjust throttle, clutch, hopper and brush height. Handles dirt, trash, scraps—50,000 sq. ft. per hr. Optional riding sulky.

Ask for a free demonstration.

PARKER
INDUSTRIAL FLOOR SWEEPER
Manual . . . Motorized . . . Dust Control
Parker Sweeper Co., 39 Bechtle Ave., Springfield, Ohio

For more details circle NED-418 J4 on enclosed inquiry slip

This torque tool leads a

DOUBLE LIFE

FIRST it's a torque screw driver

THEN it's a torque wrench!

This scientifically accurate Apco torque tool does double duty. You can use it for driving screws where tension must be measured accurately. Then, remove the bit . . . substitute a socket, and presto — it becomes a vertical torque wrench that can be used to tighten nuts up to 100 inch pounds. Available in 13 size ranges — in inch grams; inch ounces; and inch pounds.

Here's your chance to save money . . . with two tools in one! This minutely accurate torque tool is made with the same care that characterizes all Apco Mossberg Torque Tools. Send for complete facts. Apco Mossberg Company, 161 Lamb Street, Attleboro, Mass.

APCO MOSSBERG COMPANY

ATTLEBORO, MASS.

▲ For more details circle NED-419 J4 on enclosed inquiry slip ▲

Functional Ranges

for wide measurement needs

New

WESTON (Model 980)

Volt-Ohm-Milliammeter

RANGES:

D-C Volts: 1.6, 8, 40, 160, 400, 1600 (20,000 Ohms/Volt)
A-C Volts: 1.6, 8, 40, 160, 400, 1600 (1,000 Ohms/Volt)
DB Range: —15 db to +54 db (in six ranges)
D-C Milliamperes: 8, 80, 800
D-C Microamperes: 80
D-C Amperes: 8

OHMS RANGE	CENTER SCALE	FULL SCALE
R x 1	25	1,000
R x 10	250	10,000
R x 100	2,500	100,000
R x 1,000	25,000	1 megohm
R x 10,000	250,000	10 megohms

Accuracy 2% d-c, 3% a-c
Scale length 4.63"—size 6¼" x 7½" x 3¼"
Weight 2 lbs., 11 oz.

Complete literature on Model 980, and other WESTON test equipment available on request. WESTON Electrical Instrument Corporation, 614 Frelinghuysen Avenue, Newark 5, New Jersey 8104

At leading Distributors

WESTON Instruments

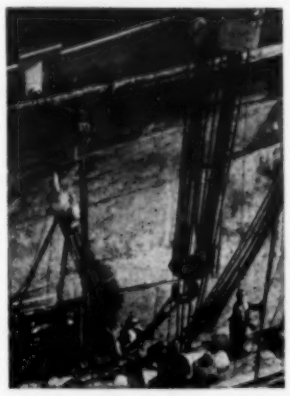
▲ For more details circle NED-420 J4 on enclosed inquiry slip ▲

SCRAP CHOPPER
for attachment to all presses

Low cost is feature of Jaco scrap chopper which attaches to bed of any press. Unit is powered by press ram and handles steel up to 3-in. wide and 0.062-in. thick. It is independent of the die. Blade installation has been facilitated so that least possible production time is lost when blade needs sharpening. Made by **Jaco Devices Inc.**, 95 High St., Hingham, Mass.

▲ For more details circle NED-421 J4 on enclosed inquiry slip ▲

CHAIN HOIST
handles loads up to 25 tons

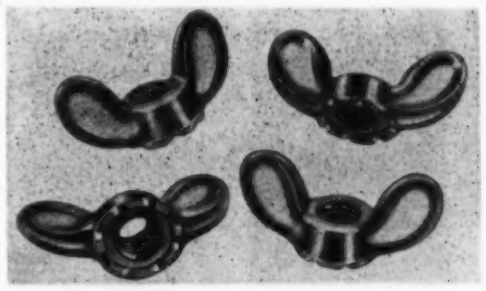


Lightweight 25-ton all-purpose chain hoist is shown at left in illustration, older type at right. Unit is produced in 11 capacity models and features sealed construction for operation in unfavorable conditions. Only maintenance required is periodic replenishing of oil in the wick oiler. Non-fouling hand chain guide prevents hand chain from gagging and permits its use from any angle. Five to 10-ton models have six pocket sheaves, 12 to 25-ton models have ten pocket sheaves. Sheaves are carried in and shrouded by steel castings. Made by **American Chain & Cable Co.**, Wright Hoist Div., York, Pa.

▲ For more details circle NED-422 J4 on enclosed inquiry slip ▲

WING NUTS
have self-locking serrated base

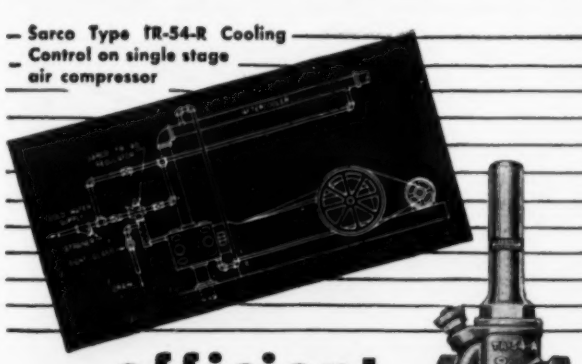
Serrated base self-locking wing nuts are available in a complete range of standard industrial sizes. They are rustproof zinc alloy and are recessed for thumb



grip. In addition to a plain bright finish, all commercial finishes can be furnished. Made by **Gries Reproducer Corp.**, 400 Beechwood Ave., New Rochelle, N. Y.

▲ For more details circle NED-423 J4 on enclosed inquiry slip ▲

— Sarco Type TR-54-R Cooling Control on single stage air compressor



efficient COMPRESSOR COOLING

- Do you want to avoid over — or under — cooling?
- Do you want to save cooling water and lubricants?
- Do you want to increase the efficiency and life of your air compressor? . . . then install SARCO COOLING CONTROLS

Simple • Self-operated • Inexpensive

Ask for Bulletin No. 701

Sarco TR-54-R

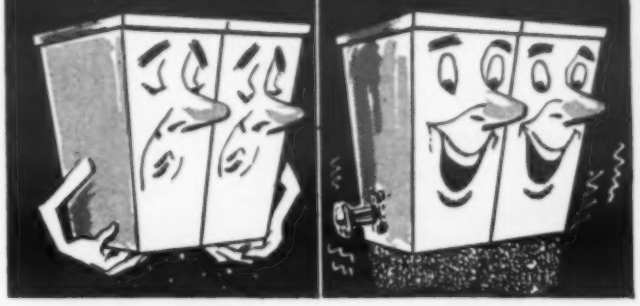
SARCO COMPANY, INC.

EMPIRE STATE BUILDING, NEW YORK 1, N. Y.
Represented in Principal Cities
SARCO CANADA LTD., TORONTO 8, ONTARIO

518

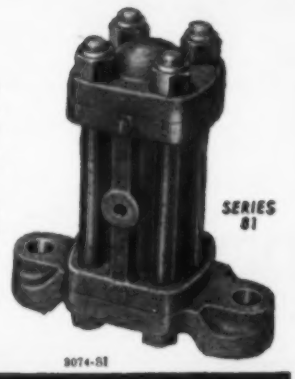
▲ For more details circle NED-424 J4 on enclosed inquiry slip ▲

FOR BINS THAT WON'T LET GO



specify SPO air vibrators

Your best insurance against bin stoppage is SPO air vibrators. These low-cost units deliver powerful blows that end jamming, packing and clogging of powdered or granular materials. SPO air vibrators are available in types and sizes to meet all requirements.



SERIES 81

Write for Bulletin 50 for complete details

SPO INCORPORATED

6475 Grand Division Avenue • Cleveland 25, Ohio

▲ For more details circle NED-425 J4 on enclosed inquiry slip ▲

CONTRACT MANUFACTURING!

BERGER SPECIALIZES

in finest finishes on sheet steel products

Berger offers a unique combination of specialized contract manufacturing facilities geared to big volume runs of sheet steel products. Finishing facilities are outstanding, and capable of delivering the same quality you see in Berger's own products—office furniture, steel kitchens, lockers, shelving. In addition, Berger offers you the use of large stocks of tools and dies; design and engineering assistance; advantageous shipping out of centrally-located Canton, Ohio. Berger service is complete, including machine work, welding, assembly, finishing, and packing. Fully described in Bulletins 793 and 908. Write:

BERGER MANUFACTURING DIVISION
REPUBLIC STEEL
1084 Belden Ave., Canton 5, Ohio • Export Dept.: Chrysler Bldg., New York 17, N.Y.

▲ For more details circle NED-426 J4 on enclosed inquiry slip ▲

MAKE CAMS for your light work THIS EASY WAY

Start with Synthane Laminated Plastic Cam Blanks—
√ Accurately turned and bored √ Pin hole drilled
√ Radial layout lines imprinted

5 Sizes—Sold Separately or In Sets

Our 25th Year

SYNTHANE

MAIL THIS COUPON TODAY

SYNTHANE CORPORATION
N.E. River Road, Oaks, Pa.

Please ship the following and bill us:

Size	Price Per Set	Price Each Turret Cam Blank (1 Per Set)	Price Each Cross Slide Cam Blank (2 Per Set)
No. 00	$3.00 ☐	$1.20 ☐	$.90 ☐
No. 0	5.30 ☐	2.10 ☐	1.60 ☐
No. 2	8.10 ☐	3.60 ☐	2.25 ☐
No. 4	12.50 ☐	6.50 ☐	3.00 ☐
No. 6	19.15 ☐	10.75 ☐	4.20 ☐

State number of sets or blanks desired in squares above

NAME
COMPANY NAME
ADDRESS
CITY STATE

▲ For more details circle NED-427 J4 on enclosed inquiry slip ▲

AMS helps customer save $24,000 a year!

9 Fixtures, Costing Under $2,000 Effect Huge Annual Saving!

● When a manufacturer builds a good product . . . that's interesting; BUT, when a manufacturer builds a superior product that each year saves the buyer *12 times* what he pays for it . . . *that's news!* One of ALLIED METAL SPECIALTIES' customers, a leading aeronautical manufacturer, gave Allied the job of designing and fabricating 9 fixtures, for their plant. Allied not only designed and built the fixtures, they engineered a $2,000 a month saving into the customer's line. How many fixtures, retorts, baskets, trays, racks, crates or muffles have you bought that will save you that kind of money?

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● Design and Fabrication
● All Metals and Alloys
BASKETS ● CRATES ● TRAYS RACKS ● FIXTURES MUFFLES ● RETORTS

▲ For more details circle NED-428 J4 on enclosed inquiry slip ▲

Clipper MASONRY SAW

SPECIAL SHAPES
Precision Cut on the Job From Standard Refractory Stocks

Every shape and size refractory **cut in seconds.** Perfect fitting reline jobs that last longer—cost less. And Clipper's Patented Features give you DUSTLESS cutting, instant Portability and complete Flexibility.

Nearly 20 Years Experience Behind GENUINE CLIPPER PRODUCTS

The unqualified Clipper guarantee of satisfaction is backed by world-wide experience, the ability to select the finest materials and the "know-how" to put them together.

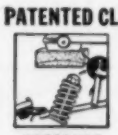
DON'T GAMBLE!
You are GUARANTEED ECONOMY with CLIPPER SUPERIOR BLADES!

. . . all specifications of Abrasive, Diamond and "CBR" (Break-Resistant) Blades guaranteed to "Consistently Provide the fastest cut . . . at the lowest cost . . . with the greatest ease!"

FREE TRIAL!

Discover how Clipper will increase profits by increasing production at reduced costs. "ON THE JOB" FREE TRIAL guarantees satisfaction at NO OBLIGATION.

PATENTED CLIPPER FEATURES



PRESSURE EQUALIZER
Automatically Cushions Blade for Longer Life.

SELECT-A-NOTCH
Instant Adjustment for Any Size Material.

Clipper

SAVE BY SAWING REPAIR PATCHES and TRENCHES IN FLOORS—RUNWAYS —STREETS with a CLIPPER "CONSAW"
5 MODELS—GAS OR ELECTRIC POWERED

MANUFACTURING CO.
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69 E. 28th St. • KANSAS CITY 8, MO.
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COMPANY_____
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CITY_____ STATE_____

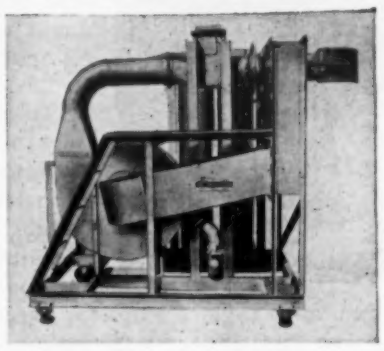
▲ For more details circle NED-429 J4 on enclosed inquiry slip ▲

DIE CAST WHEELS
available in 4 to 12-in. sizes

Pressure die-cast wheels are available in 4, 6, 8, 10 and 12-in. sizes with ball, nylon, Oilite or steel bearings. Wheels are corrosion - resistant and are highly finished. Wide semipneumatic safety-tread tires of 75-lb load test capacity are suitable for a wide range of applications. Hub bearing lengths are 1½ in., and wheels are available for 7/16, ½ and 9/16-in. axle diameters. Made by **National Die Casting Co.**, 3641 W. Touhy Ave., Chicago 45, Ill.

▲ For more details circle NED-430 J4 on enclosed inquiry slip ▲

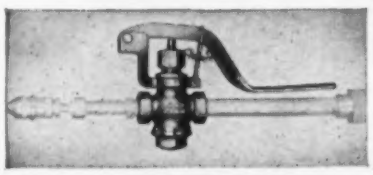
PNEUMATIC CAR LOADER
portable unit for bulk materials



Caster-mounted portable pneumatic car loader is fed from overhead screw conveyor through rotary valves and will load an 80,000-lb boxcar in 2 to 4 hours, depending on material handled. When in use, loader is raised from the casters and rests solidly on its frame. Dusting is eliminated by two filter tubes which bleed air from the blower fan and produce a slight negative pressure in the car. When the run is completed, opening a valve cleans out dust accumulated in the filter and puts it into the car. Made by **Day Co.**, Dept. NED, 810 Third Ave., N. E., Minneapolis 13, Minn.

▲ For more details circle NED-431 J4 on enclosed inquiry slip ▲

GLOBE VALVE
for cleaning and spraying equipment



Built to take rough handling, this lever-operated globe valve can be used with steam at 150 psi or with water, oil and gas at 300 psi. It is for use on cleaning and spraying equipment. Quick-opening and leaktight, it is made from bronze with reinforced steel insert in stem to prevent excessive wear from lever. Five sizes from ¼ to 1 in. are available. The ¼ and ⅜-in. sizes can be used as compressed air blowguns. Made by **Ohio Brass Co.**, 380 N. Diamond St., Mansfield, O.

▲ For more details circle NED-432 J4 on enclosed inquiry slip ▲

▲ For more details circle NED-433 J4 on enclosed inquiry slip ▲

7 Parts—2 Minutes
A Perfect Rubber Lined Pipe Joint!

In the field or in the shop, FIELDLINK pipe joint for RUBBER LINED pipe radically reduces the cost of rubber lined pipe installations. Repairs to pipe lines quickly made by using FIELDLINK in place of standard pipe flanges on lined piping.

Easily installed by field or shop men—without piping layouts or engineering assistance.

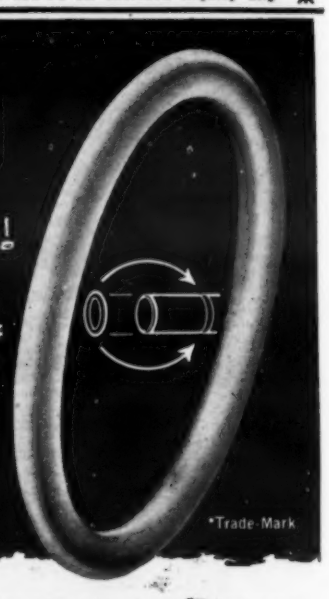
For Complete Details, Send for Bulletin 2958.

LA FAVORITE RUBBER MFG. CO.
273 Wagaraw Road • Hawthorne, N. J.
RUBBER LININGS • RUBBER COVERING • RUBBER ENGINEERING

▲ For more details circle NED-434 J4 on enclosed inquiry slip ▲

FREE SAMPLES AND BOOKLET!

NEW SHAKEPROOF® Plasti-Rings* CUT SHAFT RETAINING COSTS



*Trade Mark

Slash costs of shaft retention and provide a more powerful, efficient retainer! Made of elastic vinyl that's oil, chemical and corrosion resistant, SHAKEPROOF Plasti-Rings roll into prepared groove on shaft . . . provide a shoulder that withstands up to 250 lbs. direct shear. 16 sizes: ⅛"—1" shaft size. Send for free Sample Kit and Booklet today!

SHAKEPROOF "Fastening Headquarters"®
DIVISION OF ILLINOIS TOOL WORKS
St. Charles Road, Elgin, Illinois • Offices in principal cities

▲ For more details circle NED-435 J4 on enclosed inquiry slip ▲

2000...6000 PSI HYDRAULIC PRESSURE
From Your Shop Air Line

With this WATSON-STILLMAN Double Acting Air Engine Pump

A compact, lightweight hydraulic pump for many applications:
- For Hydrostatic testing
- As a pumping unit for all types of hydraulic service
- To operate hydraulic jacks or machinery
- To fit your special hydraulic applications

Simply connect the pump to your shop air line or field compressor. Operates on pressures from 50 to 150 psi.

Write today for Bulletin A-5

WATSON-STILLMAN FITTINGS DIVISION
H. K. PORTER COMPANY, INC.
Roselle, New Jersey
2-A

▲ For more details circle NED-436 J4 on enclosed inquiry slip ▲

"Saved Cost of New Warehouse" says PALTIER USER

Paltier STORAGE SYSTEM

increases storage space up to **75%** and more — decreases man handling as much as **75%**

ASK US: PALTIER studies your storage problem —engineers and designs a system for your specific needs.

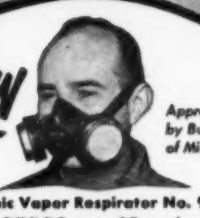
Many PALTIER installations pay for themselves "right from the start."

This booklet tells the PALTIER story, ask for it today.

THE PALTIER CORP.
1705 Kentucky St., Michigan City, Ind.

For more details circle NED-437 J4 on enclosed inquiry slip

CESCO RIGHT... before your Eyes!



NEW — Approved by Bureau of Mines

Organic Vapor Respirator No. 99

• New CESCO twin 85 cc absorbent cartridge respirator has positive acting inhale-exhale valves which prevent re-breathing or exhausting through cartridges. Valves replaced without tools. Cartridges replaced by unscrewing retaining caps. B of M approval No. 2307.

Converts to Dust Respirator No. 96

• Replace vapor cartridges with CESCO filter pads to make No. 96 Dust Respirator. Treated wool-felt filters use entire frontal surface, provide maximum efficiency, little breathing resistance. B of M approval No. 2167.

Dual Purpose Saves Money

• CESCO Respirators have contoured facepiece for snug, comfortable, leak-proof fit. You buy only one respirator and elements as desired.

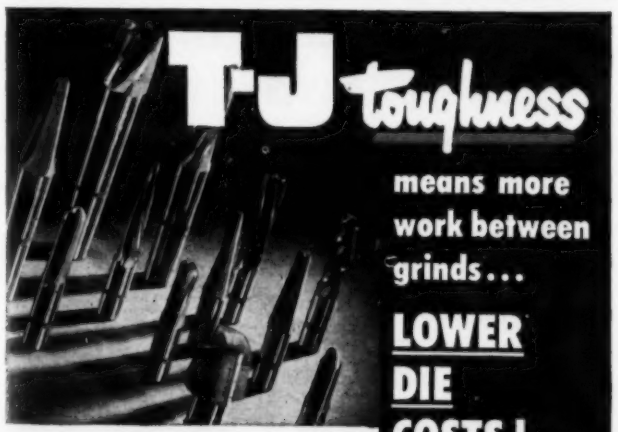
Send TODAY for CESCO literature

CHICAGO EYE SHIELD COMPANY • 2322 Warren Blvd. • Chicago 12, Ill.

CESCO FOR SAFETY

OFFICES IN: Atlanta, Birmingham, Boston, Buffalo, Cincinnati, Cleveland, Columbus, Detroit, East Orange, Houston, Kansas City, Knoxville, Little Rock, Los Angeles, Mexico City, D. F., Milwaukee, Montreal, Philadelphia, Pittsburgh, Salt Lake City, San Francisco, Spokane, St. Louis, St. Paul, Toledo, Tulsa

For more details circle NED-438 J4 on enclosed inquiry slip



T-J toughness means more work between grinds... LOWER DIE COSTS!

LARGEST SELLING CUTTERS FOR TOUGH DIE STEEL

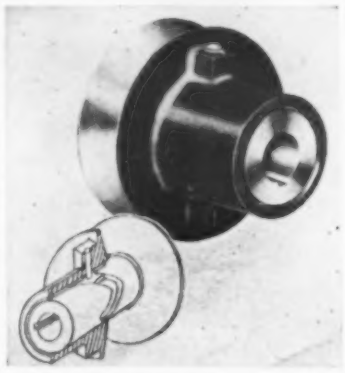
Be sure of *top performance* in die sinking milling cutters ... specify T-J! They're preferred everywhere today in die and forge shops ... because T-J Cutters are *extra sturdy* ... you can raise the feed!

Designed for speed, accuracy and long life ... hold a sharp edge longer on job after job ... less breakage! Made from an extremely high grade steel ... properly machined ... scientifically heat-treated and accurately ground. Wide range of styles and sizes to *reduce your* die costs. Send for new catalog 4-153. The Tomkins-Johnson Co., Jackson, Michigan.

T-J TOMKINS-JOHNSON
DIVISIONS: AIR AND HYDRAULIC CYLINDERS, CUTTERS, CLINCHERS

For more details circle NED-439 J4 on enclosed inquiry slip

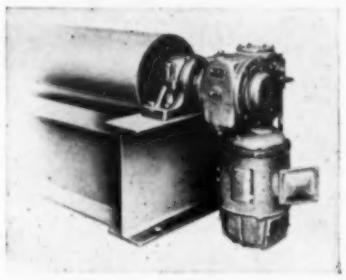
V-BELT PULLEY is of variable diameter design



V-belt pulley can be varied in diameter to give stepless speed control through change of center distance without loss of driving torque. When installed on equipment with one-way drive, it provides protection against wrong way operation since it will not transmit power opposite the installation. It provides automatic belt tensioning and is self-lubricating. Made by **Miner Pulley & Transmission Co.**, 1203 E. 58th Ave., Denver 16, Colo.

For more details circle NED-440 J4 on enclosed inquiry slip

FLOATING GEARMOTOR for roll and conveyor drives



Selfcontained floating gearmotor mounts directly on the driven shaft and is designed to simplify powering of roll and conveyor drives. It is prevented from rotating by a torque arm and can be mounted in almost any location or position. Compact unit can be provided with cast steel or cast iron housing. It gives output speeds from 8 to 800 rpm and is available with motors from 1 to 15 hp. Made by **Philadelphia Gear Works**, Erie Ave. & G St., Philadelphia 34, Pa.

For more details circle NED-441 J4 on enclosed inquiry slip

VARIABLE RESISTOR eliminates arcing in thermostats

Arcing in mercury-in-glass thermostats, which normally occurs when circuit opens, can be eliminated by the Princo Stat-Varistor. Device is variable resistor measuring 1 x 1½ in. and is constructed of series of selenium plates hermetically sealed in glass. Voltage surges as high as 2750 v in a circuit using 117-v ac power can be held down to 170 v on alternating current and 50 v on direct current, with no arcing. Resistance of unit changes as voltage across it is changed, eliminating destructive arcing. Made by **Precision Thermometer & Instrument Co.**, Dept. E-2, 1434 Brandywine St., Philadelphia 30, Pa.

For more details circle NED-442 J4 on enclosed inquiry slip

On any carbide grinding job...

Nothing cuts like a Norton diamond wheel

Norton diamond wheels in your carbide grinding pay for themselves in the shortest possible time.

Available in three bond types: *vitrified*, generally preferable for single-point tools and chip breaker grinding; *resinoid*, for multi-tooth cutters and cutting-off; *metal*, where durability and resistance to grooving are primary. (*NOTE: For small-volume requirements, especially in single-point tool applications, the Norton K Bond* CRYSTOLON* *wheels are often the best investment.*)

SEE YOUR NORTON DISTRIBUTOR for aid in selecting the correct diamond wheels. Ask him for the booklet, "Grinding Carbide Tools." Or write to NORTON COMPANY, Worcester 6, Mass. Distributors in all principal cities. *Export:* Norton Behr-Manning Overseas Incorporated, Worcester 6, Mass. W-1582

*Trade-Mark U. S. Reg. Pat. Off. and Foreign Countries

Making better products... to make other products better

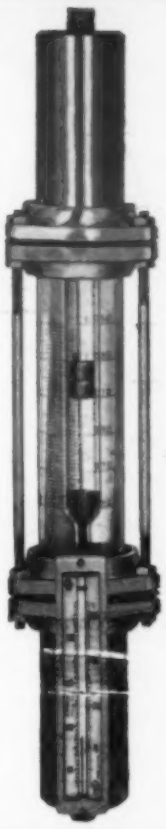
NORTON and its BEHR-MANNING division

NORTON: Abrasives • Grinding Wheels • Grinding Machines • Refractories
BEHR-MANNING: Coated Abrasives • Sharpening Stones • Pressure Sensitive Tapes

For more details circle NED-443 J4 on enclosed inquiry slip

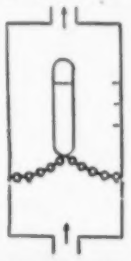
Indicates Density of Piped Liquids — *at a glance*

Princo Densitrol



A simple, rugged instrument—permanently installed in the pipe line. Gives you continuous sight readings of both density and temperature of flowing liquids such as brine, acids, component solutions and numerous other process materials. Because indicating plummet is totally submerged (unlike hydrometer), there is no surface tension or meniscus effect—thus, readings are easier to make, more accurate. For specifics on calibrations, materials of construction, etc., request Bulletin W-3.*

*Bulletin W-3 also covers models with electrical indicators for use where liquid opacity prohibits sight readings or where automatic temperature compensation, remote indication or actual control of density is desired.



PRINCO Since 1910

PRECISION THERMOMETER & INSTRUMENT CO.
1434 Brandywine Street, Philadelphia 30, Pa.

Makers of precision-built thermometers, barometers, hydrometers, gauges, indicators, mercury in glass thermo-regulators.

For more details circle NED-444 J4 on enclosed inquiry slip

Plenty of prints— fast and cheap!

An Ozalid® machine in your office is your best assurance of a ready supply of low-cost, perfect prints. A print can be made in less than a minute, for a few cents.

Ozalid reproduction is instantaneous, on chemically coated Ozalid stock. The print is delivered dry, ready for use, clear and legible; won't fade, curl, or shrink. Deletions and changes can be made on an Ozalid print—detail added for wiring, pipes, ducts, vents, special installations—without altering or doing over the master drawing.

AN Ozalid machine copies anything that is drawn, printed, typed, or written on translucent paper, fabric, film; makes prints on paper, fabric, film. It can also copy lists, specifications, contracts, forms and records as well as drawings.

There's a model for your requirements. Call the nearest Ozalid distributor (see phone book) for a demonstration. Or write for free brochure to 133 Ozaway, Johnson City, N. Y.

OZALID—A Division of General Aniline & Film Corporation ... *From Research to Reality* ... In Canada, Hughes Owens Company, Ltd., Montreal.

Ozalid Printmaster *makes copies up to 54 inches wide, at speeds up to 30 feet a minute. Simple to operate. Low maintenance. Prompt service.*

OZALID

For more details circle NED-445 J4 on enclosed inquiry slip

for leak-proof face-to-face sealing

it's the Dyna-seal® by PRECISION

Thoroughly proved sealing by a resilient synthetic rubber, flared component bonded to the inner circumference of a steel washer. Ideal for sealing bolt heads, rivets, flanges, circular flat surfaces—no groove necessary. Seals water, petroleum products, fluids and gases, all pressures.

Everyone is finding *Precision* a most reliable source for help on all sealing problems. Write today!

FREE Handbook of Dyna-seal data!

Also producers of famous *Precision* "O" Rings for thousands of sealing applications. Largest range of "O" Ring sizes available.

Precision Rubber Products Corp.
Dept. 7, Oakridge Drive • Dayton 7, Ohio

Canadian Plant at: Ste. Thérèse de Blainville, Québec

▲ For more details circle NED-446 J4 on enclosed inquiry slip ▲

CALCULAGRAPH

figures elapsed time accurately

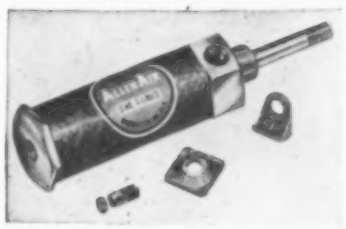
Reliable job time records are essential for compiling correct cost data, estimating reorders and checking on production efficiency. One sure way to secure accurate to the minute, dependable time costs is to use Calculagraph automatically-figured elapsed time records. Calculagraph gives you total elapsed time, starting and finishing time and date on a permanent, printed reference card. Eliminate losses due to inaccurate job time calculations by using Calculagraph to time your operations.

Write for full information today, to Dept. 302

CALCULAGRAPH COMPANY
SUSSEX STREET, HARRISON, NEW JERSEY

▲ For more details circle NED-447 J4 on enclosed inquiry slip ▲

AIR CYLINDERS
double-acting, up to 6-in. stroke



Double-acting Stud-mount air cylinders have 1⅛-in. bore and are available in ½-in. increments of stroke from 1 to 6 in. Brass heads are nickel plated and screwed into honed and "copper-brited" cylinder tube. Stainless steel piston rod is screwed and brazed to brass piston. Standard O-ring seals are used. Foot and flange mounts as well as piston rod clevis are available. Made by **A. K. Allen Co.,** 57 Meserole Ave., Brooklyn 22, N. Y.

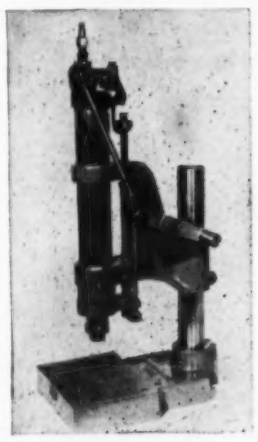
▲ For more details circle NED-448 J4 on enclosed inquiry slip ▲

DOOR LOCKS
for one, two or three-point locking

Option of locking doors at one, two or three points is given by this series of locks. One-point lock has a striker bolt. Two-point lock has two rods for locking doors at top and bottom. Three-point lock has both the striker bolt and the rods. All three locks are operated by a flush handle which folds into a recessed cup when not in use. Handle is available in either 4⅞ or 6-in. OD sizes. Locking rods are 30-in. long and can be cut to length for any height door. Made by **A. L. Hansen Mfg. Co.,** 5164 Ravenswood Ave., Chicago 40, Ill.

▲ For more details circle NED-449 J4 on enclosed inquiry slip ▲

PNEUMATIC IMPACT PRESS
impact range is 0 to 7000 lb



A smaller and simplified version of model 3-VS pneumatic impact press (*NED Jan.*—1954), model 2-CSB has an impact range from 0 to approximately 7000 lb. Tool is used for staking, assembling, impact shearing, riveting and similar operations. It is foot-pedal operated, impact force being adjusted by regulating air volume. Use of the hand lever traverse is optional. Press is safe to operate and easily set up. Impact force is uniform regardless of work thickness. Operating cylinder can be removed from the frame and used as a portable unit or incorporated in special fixtures. Made by **Heidrich-Nourse Co.,** 633 E. Third St., Los Angeles 13, Calif.

▲ For more details circle NED-450 J4 on enclosed inquiry slip ▲

SAFETY EQUIPMENT FOR ALL INDUSTRIES

M&M RAIL CLAMPS

Used for car stops, on loading platforms, temporary sidings, cars on grades and traveling cranes.

THIS The Dangerous Way OR **THIS** THE SAFE WAY

Used and recommended by leading Steel Companies, Manufacturing Plants, Mines, Grain Elevators, Cement Plants and Quarries.

WRITE FOR BULLETIN NO. 4

IPCO Safety Equipment for all Industries

INDUSTRIAL PRODUCTS COMPANY
2807 N. FOURTH STREET • PHILADELPHIA 33, PA.

▲ For more details circle NED-451 J4 on enclosed inquiry slip ▲

Here's something **NEW** in straight-form thermometers

THEY OFFER

THESE OUTSTANDING PLUS FEATURES

DURABILITY — All parts of the new Rochester straight-form thermometers (except crystal) are of corrosion-resistant stainless steel. All are fused into a single unit by an exclusive welding process. Hermetic sealing assures easy reading of dial under any operating condition. No clouding.

EXTERNAL RECALIBRATION — Only Rochester thermometers can be recalibrated externally. A screw adjustment permits you to restore accuracy even if you knock the thermometer out of adjustment with a hard blow.

SELECT YOUR STEM POSITION — This thermometer is ordinarily supplied with the stem located at the bottom. However, it can be placed at the location you desire around the entire dial circumference. Available in stem lengths from 2½ to 4 in. **Rochester Manufacturing Company, Inc., 114 Rockwood Street, Rochester 10, N. Y.**

Write for further information.

Rochester MANUFACTURING COMPANY, INC.
DIAL THERMOMETERS • GAUGES • AMMETERS

▲ For more details circle NED-452 J4 on enclosed inquiry slip ▲

Send for your **FREE SAMPLE** *of the Amazing New Lubricant*

Prove to yourself its extraordinary performance

Molylube Anti-Seize is a highly concentrated *non-melting* molybdenum disulphide grease having the phenomenal capacity to prevent galling and seizing at bearing pressures well over *100,000 pounds per square inch.* It has excellent lubricating qualities at low temperatures and elevated temperatures up to 750°F.

BEL-RAY COMPANY, INC.
MADISON, NEW JERSEY

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Now... A Machine Feed that BREAKS the TIME BARRIER!

Every time a machine cuts air . . . every time feed fingers are adjusted or replaced . . . or remnant removal forces a shut-down — *that's production time lost forever!*

In the modern Lipe Automatic Magazine-Loading Bar Feed, we present a continuous-feed mechanism that utilizes *every minute* of the working day for production! *No* cutting air. *No* feed fingers. *No* remnant problem. *No* maximum or minimum run. *No* limit on length of feed. *No* selective stock length requirement.

There IS a definite increase in production—up to 100% on some installations — AT LEAST 30% ON EVERY ONE!

Send today for FREE BOOKLET giving full details on Lipe's AML Bar Feed. We will also supply name of your nearest dealer.

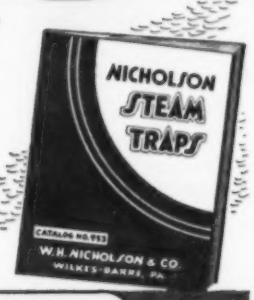
Lipe-ROLLWAY CORPORATION
Manufacturers of Automatic Clutches and Machine Tools
Syracuse 1, N. Y.

▲ For more details circle NED-454 J4 on enclosed inquiry slip ▲

NICHOLSON

TRAPS for Every Plant Application

Send for Nicholson Catalog 953. This 32-page standard reference on advance-type trapping of steam, air and other mediums contains: installation diagrams, charts and formulae for determining proper trap sizes, and advice on solving specific problems. See why leading plants are increasingly standardizing on Nicholson traps for increased production and minimum maintenance.



Send for Helpful Booklet

W. H. NICHOLSON & CO.

TRAPS · VALVES · FLOATS

162 Oregon St., Wilkes-Barre, Pa.

For more details circle NED-455 J4 on enclosed inquiry slip

FASTEST CUTTING for Weld Grinding

FIBREX

REINFORCED RESINOID WHEELS

Let these amazing wheels speed your weld grinding jobs . . . actually cut away excess metal. Send for catalog ESA 186 and ask for demonstration on your job.

SIMONDS ABRASIVE CO., Philadelphia 37, Pa.

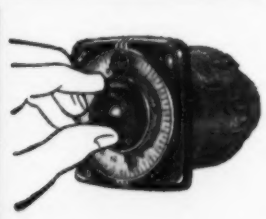
Division of Simonds Saw and Steel Co.

DISTRIBUTORS IN PRINCIPAL CITIES

BRANCH WAREHOUSES: BOSTON, DETROIT, CHICAGO, PORTLAND, SAN FRANCISCO

For more details circle NED-456 J4 on enclosed inquiry slip

low cost
. . . inventory
. . . installation
. . . maintenance



miniature
. . . for space economy

maximum circuit flexibility
. . . more than 145 electrical arrangements

An entirely new concept in automatic time interval control, Atcotrol is designed to be the standard in its field.

Requires but one clearance hole for mounting. Atcotrol timer can be demounted from panel in 2 seconds without tools. Completely serviced with a screwdriver. Either reset or stop on power failure. Motor, clutch and reset operation visible from front. Instantaneous reset. No pointer rebound. Built to NEMA standards. Conservatively rated at 10 amps. *Repeat accuracy within .1 of 1%.* Many other new and exclusive features.

Write for complete information.
Trial unit available to o.e.m.'s.
Automatic Temperature Control Company
5225 Pulaski Ave., Philadelphia 44, Pa.

Represented in Canada by: Powerlite Devices, Ltd., Toronto, Montreal and Vancouver.

atc®

ATCOTROL

RESET TIMERS

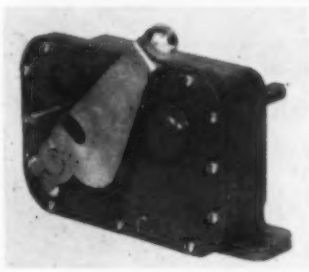
For more details circle NED-457 J4 on enclosed inquiry slip

SHEET LIFTING TOOL
consists of magnet, aluminum handle

Glove and hand-saving Magic Pick-Up Tool is designed to speed sheet lifting and handling of other awkward ferrous products. It consists of a Neoprene-covered Alnico V permanent magnet set in a high-tensile aluminum handle. Either 20, 30 or 45-lb lift sizes are available. Made by **Standard Portable Cord Co.**, 1302 E. Second St., Jamestown, N. Y.

For more details circle NED-458 J4 on enclosed inquiry slip

VARIABLE SPEED TRANSMISSIONS
adaptable for remote control



Several new models of Zero-Max infinitely-variable speed transmissions have been developed to meet need for units with special operating characteristics. Original models have capacities of 10, 15 and 20 lb-in. torque and have input and output shafts on opposite sides of the housing. New models include such variations as double output shafts, both shafts on the same side of the housing and shafts opposite from the standard units. Special length speed control arms and spring return and other control arrangements are also available. Made by **Revco Inc.**, Dept. NED, 2 E. Franklin Ave., Minneapolis 4, Minn.

For more details circle NED-459 J4 on enclosed inquiry slip

SUBMINIATURE TOGGLE SWITCHES
three-position, panel-mounted types

Two single-pole, double-throw basic switching units, providing control of up to four circuits, are contained in this Micro-Switch 13AT three-position, panel-mounting subminiature toggle switch assembly. One unit is actuated in each extreme toggle position, though neither unit is actuated in center toggle position. Thus, it is possible to have three different combinations of two circuits open and two circuits closed at any time. Switches are rated 125, 250 v ac, 5 amp; 30 v dc, 3 amp inductive at sea level, 2.5 amp inductive at 50,000 ft, 4 amp resistive at sea level and 4 amp resistive at 50,000 ft. They have standard bushing and bat handle. Made by **Minneapolis-Honeywell Regulator Co.**, Micro Switch Div., 205 S. Chicago Ave., Freeport, Ill.

For more details circle NED-460 J4 on enclosed inquiry slip

conform to J. I. C. standards

RUGGED . . .

Where it counts most!

CARTRIDGE . . . metallic rod-wiper, packing, bushing in one unit.

RUGGED BODY . . . all steel end caps and barrel.

PISTON RINGS . . . step-cut joint, long life, minimum leakage.

PRESSURE . . . 2,000 psi heavy-duty . . . 3,000 psi non-shock.

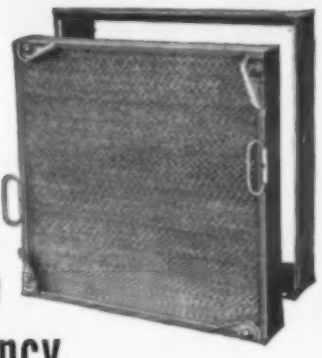
SIMPLICITY . . . no tie-rods . . . no retainer rings.

hydro-line *Manufacturing Co.*

5601 PIKE ROAD • ROCKFORD, ILLINOIS

For more details circle NED-461 J4 on enclosed inquiry slip

space saving HV FILTER has longer life greater efficiency



AAF's new High Velocity filter handles the same air volume in 1/3 the space of standard unit filters. It operates effectively at velocities from 300 to 500 fpm and maintains uniform efficiency over this wide range of velocities. It's the exclusive *pyramid pocket* filtering media that makes the difference!

The H-V's low resistance, large dust capacity and longer life make it a superior unit for limited space conditions.

Available in all standard sizes and 1", 2" and 4" depths. Engineering Bulletin #203 gives complete information and technical data. Write for it today.

AAF American Air Filter COMPANY, INC.

391 Central Avenue, Louisville 8, Kentucky
American Air Filter of Canada, Ltd., Montreal, P. Q.

For more details circle NED-462 J4 on enclosed inquiry slip

RAKIT®

QUICK MOUNTING BRACKETS

SIMPLIFIED SUPPORTING STRUCTURES

The new one-piece RAKIT Brackets have been specifically designed for quick and easy installation without nuts, bolts, or other fastening devices.

JUST A TWIST OF THE WRIST
There's no slipping or falling out.

These brackets are ideal for the support of items such as cable trough, instrument tubing trough, conduit, pipe, cable and many others.

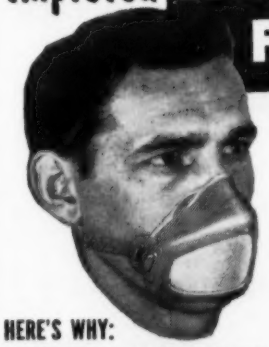
The savings in assembly time and labor made possible by this one-piece RAKIT Bracket assure "better support for less cost." Write today for further information. Ask for bulletin 9D.

RAKIT CORPORATION

711 SOUTH 50th STREET • PHILADELPHIA 43, PA.

For more details circle NED-463 J4 on enclosed inquiry slip

THE Improved FLEX-A-FOAM FILTER MASK



Your best ounce of protection against IRRITATING DUST

HERE'S WHY:

★ **Workers wear it** Lightweight (just 1 ounce), snug, comfortable and easy-to-breathe through, Flex-a-Foam is the *one* respirator your workers actually *welcome*.

★ **It's super-efficient** Flex-a-Foam's pure latex filter protects against nuisance dust particles 100 times smaller than the eye can see!

★ **It's simple** Only four sturdy, long-wearing parts — all interlocking — all *unconditionally* guaranteed.

★ **And—it's economical** *Low first cost* — less than any other *quality* respirator on the market. *Low upkeep* — washable filter outlasts throwaway type by more than 100 to 1!

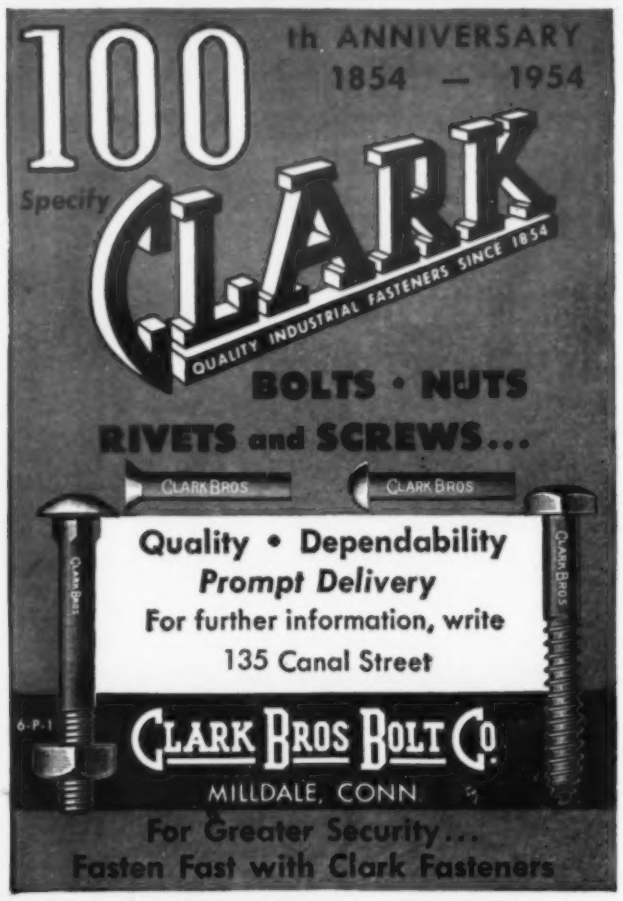
Dust Protection Your Workers Will Welcome and *Wear*

SAMPLE STILL ONLY $1.40 POSTPAID

FLEX-A-FOAM® FILTER MASK

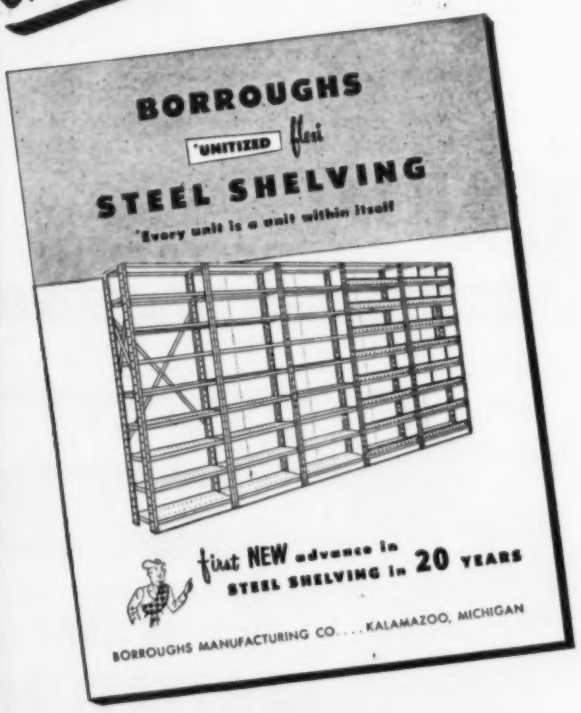
THE GOGGLE PARTS COMPANY • CLEVELAND 13, OHIO

For more details circle NED-464 J4 on enclosed inquiry slip



▲ For more details circle NED-465 J4 on enclosed inquiry slip ▲

Don't Buy STEEL SHELVING *until* you get this catalog



it's just off the press!

Read about the most original, practical and economical steel shelving on the market.. the last word in new features, simplicity and value. We could tell you more, but why not get the complete story from our new catalog? BORROUGHS UNITIZED FLEXI STEEL SHELVING has been on the market but a few months, and already it's an outstanding success. So don't buy any steel shelving until you read about Borroughs—the most advanced steel shelving in 20 years!

BORROUGHS MANUFACTURING COMPANY
A Subsidiary of American Metal Products Company of Detroit
3002 NORTH BURDICK amp KALAMAZOO, MICHIGAN

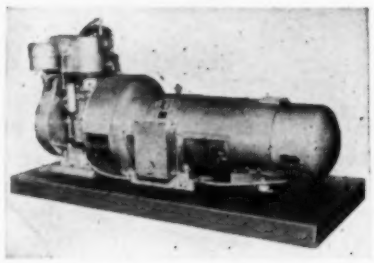
▲ For more details circle NED-466 J4 on enclosed inquiry slip ▲

SMALL PARTS SPOT WELDER
has 1 to 50-lb electrode pressures

Materials as thin as 0.003-in. can be spot welded to exacting standards with the Tweezer-Weld portable welding gun. Minimum of skill is required to weld as fast as the operator can squeeze the handle. Made of aluminum, gun offers 1 to 50-lb electrode pressures with very little hand squeeze pressure. Standard 24-in. copper leads are vinyl covered and flexible. Gun can be held in bare hands without danger to operator. Accessories include condenser-discharge power supply from 100 to 450 mfd or standard alternating current equipment including 1 to 3 kva transformer, nonsynchronous timer and heat control. Made by **Federal Tool Engineering Co.**, 1384 Pompton Ave., Cedar Grove, N. J.

▲ For more details circle NED-467 J4 on enclosed inquiry slip ▲

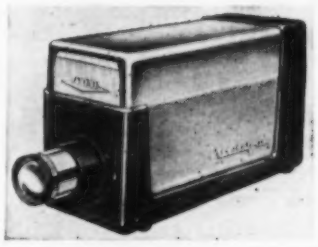
STANDBY POWER SOURCE
offered in 3 an 5-kw ratings



Micro-Power emergency stand-by power unit consists of a motor, generator and gasoline engine which operate in conjunction with the main source of power as a voltage regulator and stabilizer. Dropping alternating current voltage is increased before there is any loss of power to essential equipment. Unit is presently available in 3 and 5-kw ratings. Made by **United States Motors Corp.**, 421 Nebraska St., Oshkosh, Wis.

▲ For more details circle NED-468 J4 on enclosed inquiry slip ▲

INDUSTRIAL TV CAMERA
for closed circuit applications



All controls and power supply are built into the series 400 UtiliVue industrial television camera. It can be used with a video monitor or with a standard television receiver and can be tuned to any channel from 2 to 6. Voltage regulation and automatic illumination compensation are built in. Camera can be supplied with Utilicon long life cold cathode or with Vidicon type pickup tube. Multiple receiving points can be fed. Made by **Diamond Power Specialty Corp.**, Lancaster, O.

▲ For more details circle NED-469 J4 on enclosed inquiry slip ▲

BEST DEFENSE AGAINST CORROSION

Start with
TYGORUST
"the no-prep vinyl primer"

- minimizes surface preparation
- brushes easily—sprays beautifully
- dries hard in 5-15 minutes
- covers up to 500-600 sq. ft./gal.
- goes under any type finish
- adheres to wet or dry rusted steel, to wood, to concrete, or to previously painted surfaces.

Finish with
TYGON "Series TP" PAINT
"the vinyl finish of maximum protection"

- easily applied by brush or spray
- fast drying and non-oxiding
- fully flexible and chip-resistant
- non-flammable when dry
- easy to clean and long lasting
- resists fumes and spillage of acid, alkalies, oils, greases and water.

Write for full details—ask for Bulletin 720!

360 C

U. S. STONEWARE CO.
AKRON 9, OHIO

▲ For more details circle NED-470 J4 on enclosed inquiry slip ▲

Move Air or Fumes ECONOMICALLY with new PORTOVENT® Duct
Available in sizes 3 in. ID to 36 in. ID

11 in. diameter PORTOVENT extended and compressed.

This new spiral-wire reinforced ducting has many features which can mean savings in time and money.

First cost is low. Portovent is easy to connect and install. It can be cut to any length on the job with no weakening or raveling, because it has fully bonded seams. Portovent has excellent lengthwise compressibility . . . is easy to transport and store . . . maintains large sections on sharp bends . . . has excellent air flow characteristics.

Portovent is made with Nylon base (Type SY) or cotton base (Type SC). Both are impregnated with age-resisting Neoprene compound.

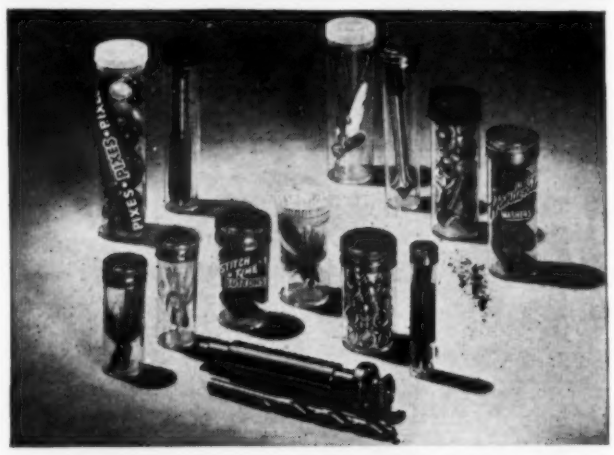
Write today for details on this new Portovent Ducting.

*Trade-mark

THE FLEXAUST COMPANY
Dept. NE-9 100 Park Avenue, New York 17, N. Y.
Formerly American Ventilating Hose Co.

FLEXAUST® PORTOVENT® BLOFLEX*

▲ For more details circle NED-471 J4 on enclosed inquiry slip ▲



LERMER PLASTIC CONTAINERS Help You Make Satisfied Customers

Package your products in Lermer Plastic durable, handsome containers. They are shatterproof, 75% lighter than glass, available clear or opaque in many colors, can be printed or decorated and are available with metal or plastic closures. Write for complete catalog information and samples. If possible, send along products for particular suggestions.

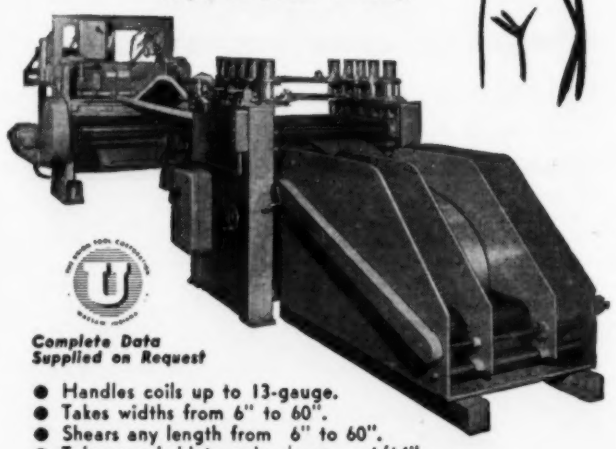
LERMER PLASTICS, INC.
Pioneers and Specialists in Plastic Containers
514 South Ave., Garwood, New Jersey

▲ For more details circle NED-472 J4 on enclosed inquiry slip ▲

WITH ONLY ONE OPERATOR THIS **UNION MACHINE**

- DE-COILS
- LEVELS
- SHEARS
- STACKS

CUTS LABOR COSTS
AUTOMATICALLY
CUTS MATERIAL COSTS
Buy in coils and cut sheet lengths as needed. No delay.



Complete Data Supplied on Request

- Handles coils up to 13-gauge.
- Takes widths from 6" to 60".
- Shears any length from 6" to 60".
- Tolerance held to only + or — 1/64".
- Only one adjustment to change lengths.
- Speeds to 150 l.f.p.m. depending on lengths cut.
- Neatly stacks sheared pieces automatically.
- Will handle steel, aluminum, etc.

UNION TOOL CORP.
318 E. MARKET ST., WARSAW, IND., U. S. A.

USERS SAY UNION CUTS COSTS, SPEEDS PRODUCTION

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DO YOU KNOW THESE FACTS ABOUT PRE-FINISHING?

Know how to keep your finishing process from becoming outdated? Switch to prefinished ENAMELSTRIP. A few facts about this pioneer process will show you it pays to finish the modern, ENAMELSTRIP way:

- Coats and colors metal before fabricating.
- Eliminates costly operations.
- Comes precision-slit to your specifications in a choice of metals.
- Non-anodized organic finish, withstands all Fabricating stresses.
- Finished in one, or two colors (one on each side).

GET ALL THE FACTS ON ENAMELSTRIP in our new *full-color bulletin.* Send for yours today.

THE COATED COIL CORPORATION
507 West 30 Street, New York 1 • LOngacre 5-3161

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Use SMALL METAL PARTS?

Small Zinc Die-Castings—1000 per lb. to 3 per lb.—made on *fully automatic* machines that combine the design latitude of die-casting with production rates of screw machines, stamping presses, etc. Attractive tool costs. Investigate! Send for Small Parts Folder & Samples . . . or send prints or samples for quotation. *Dollin Corporation, 612 So. 21st. St., Irvington 11, N. J.*

DOLLIN SMALL ZINC DIE-CASTINGS

▲ For more details circle NED-475 J4 on enclosed inquiry slip ▲

COMPLETE LINE
RESISTANCE SOLDERING DEVICES

Production engineers recognize the resistance soldering principle as a practical answer to heavy duty and production-line soldering problems. Initial costs are offset by immediate savings in time, material, and from increased production and efficiency. When confronted by production-line soldering problems, consider employing resistance soldering in your plant!

- faster—production increased 3 to 5 times
- economical—no wasted solder, flux or power
- safe—no burn, shock or visual arc hazard
- efficient—instantaneous, controlled heat for all types of soldered joints

Wassco

for complete details, write
WASSCO ELECTRIC PRODUCTS CORP.
DEPT. 3 • 126 W. CASS ST. • JOLIET, ILLINOIS

▲ For more details circle NED-476 J4 on enclosed inquiry slip ▲

END DUMP TRUCKS
with wheels or pallet skid base

Dumping hopper contents of these end dump trucks is achieved by releasing simple lock. Practically no effort is required to return hopper to original position. Trucks can be made in variety of capacities without impairing dump - return facility. Units can have wheels or pallet-type skid base. Flange on either side along top edge of hopper, for transporting via overhead handling equipment, is another option. Made by **Klaas Machine & Mfg. Co.,** 4310 E. 49th St., Cleveland 25, O.

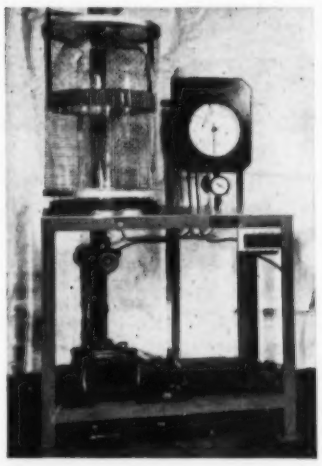
▲ For more details circle NED-477 J4 on enclosed inquiry slip ▲

ROLL-OVER DUMP BOX
designed for compact tiering

Compact 12-gage steel corrugated hopper-front dump boxes are designed for tiering and roll-over dumping. Materials can be manually removed from stacked boxes through the hopper front. Four-way fork-entry slots are provided. Box construction is oilproof, so that chips and other materials can be handled without fouling floors. Double-locking angles at both rear corners and reinforcing front bar insure steadiness when stacked. Made by **Union Metal Mfg. Co.,** Dept. NE, Canton 5, O.

▲ For more details circle NED-478 J4 on enclosed inquiry slip ▲

ALTITUDE CHAMBER
engineered to requirements



This altitude chamber device accurately controls and records pressures for simulated altitudes of from 25,000 to 100,000 ft. Units are specifically engineered to meet customer requirements, whether they be laboratory research, production or industrial. Made by **Optical Film Engineering Co.,** 2736 N. Sixth St., Philadelphia 33, Pa.

▲ For more details circle NED-479 J4 on enclosed inquiry slip ▲

NEW!
Rapistan® SEALED CASTER

5200 Series Rapistan Sealed Caster with 6" Sealed MB Demountable Wheel.

at ⅓ less cost than ordinary non-sealed casters!

Now, for the first time, this revolutionary Rapistan development gives you a heavy-duty cold-forged *sealed* caster at *⅓ less cost than ordinary leading non-sealed casters!* Save in longer caster life, improved performance, lower maintenance. Dirt, acids, alkalis, brines, other chemicals are *sealed out* of coin-hardened raceways. Ask your Rapistan distributor to show you the comparative service chart, or write direct.

YOURS FREE! *Write for handbook describing Rapistan casters including new 5200 Series.*

The RAPIDS-STANDARD COMPANY, Inc.
225 Rapistan Building • Grand Rapids 2, Michigan

Rapistan® FASTEST GROWING NAME IN CASTERS

▲ For more details circle NED-480 J4 on enclosed inquiry slip ▲

R&M CHAIN HOISTS

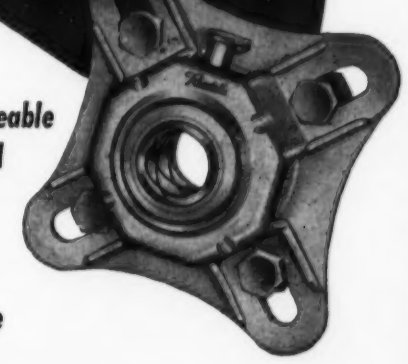
miser
WITH YOUR MONEY

There's a wealth of engineering experience in each R & M *JC* hoist, yet prices start at just $188.00. Big hoist features; unit cast aluminum alloy frame — Weston-type load brake — upper and lower limit switches — heat treated gears and shafts — R & M hoist motor — sealed ball bearings — alloy steel welded link coil chain — forged steel hooks. *Capacities:* 500 to 2,000 lbs. *Speeds:* 34, 17, or 9 f.p.m. *Control:* pendent rope. *Mounting:* hook or Bulldog trolley. For complete details, and address of local distributor, write for Bulletin No. 852. Please mention: NEW EQUIPMENT DIGEST

take it up with
ROBBINS & MYERS, INC.
SPRINGFIELD, OHIO | BRANTFORD, ONTARIO

▲ For more details circle NED-481 J4 on enclosed inquiry slip ▲

NEW
Randall LOW COST 4-BOLT FLANGE UNIT



- *Easily Interchangeable*
- *Double Lubricated*
- *Self-Aligning*
- *Self-Lubricating*
- *Easy to Install*
- *Long Trouble-Free Service*

Randall's new 4-bolt flange is readily interchangeable with any unit having bolt hole centers from 2⅛" to 2¾". It's ideal for heavy duty application on farm implements, conveyors, textile machinery, air moving equipment, packaging machinery and other similar type equipment.

*

This new, low-cost, four-bolt flange pillow block has all the outstanding features synonymous with Randall bearings. It features the famous, exclusive Randall "deep well"® ball assembly which offers a unique double lubricating principle combining Randall's exclusive graphited bearings with grease or oil type lubricants. This assures controlled lubrication for long trouble-free operation.

Compact and light weight, the Randall 4-bolt flange is designed with slotted bolt holes which permit fast assembly and easy interchangeability. Units are shipped assembled as one piece to assure easy handling and installation. Complete information is yours for the asking — Write today!

BRONZE BAR STOCK · BRONZE BUSHINGS · PILLOW BLOCKS · SHEET LUBRICATOR · GRAPHITED BEARINGS · THRUST WASHERS · SAFETY COLLARS · BRONZE CASTING

Randall

RANDALL GRAPHITE BEARINGS, INC.
1007 S. Greenlawn Avenue, Lima, Ohio

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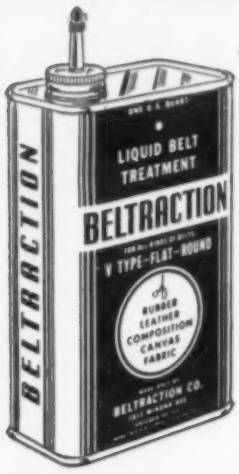
AT NO EXTRA COST



For ALL types of belts—V-Type, Flat or Round. More than 110,000 users.

Machines Respond Quicker Production Rises—Drive Belts Work Efficiently with

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LIQUID BELT TREATMENT

It is like adding extra production capacity without adding a cent to your investment in equipment when you start using BELTRACTION on your drive belts.

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BELTRACTION COMPANY
1817 W. Winona St. Chicago 40, Ill.

FOR ALL TYPES OF BELTS • V-TYPE, FLAT OR ROUND

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2 NEW
CONNECTING ROD ENDS ...TO GIVE POSITIVE PUSH AND PULL... control

AVALON now offers you a choice of either the new ball bearing connecting rod end or spherical single ball model.

Avalon Ball Bearing Rod Ends have replaceable bearings which rotate in Super Leadloy steel housings. This model is specially recommended where continual rotation is involved, as it is practically friction-free.

The Spherical Ball Avalon Connecting Rod Ends have hardened steel balls which rotate in their housings, either aluminum or steel.

Both models give positive control at all times, correcting misalignment up to 20°.

Descriptive Catalog with Sizes and Prices Upon Request.

AVALON
MACHINE PRODUCTS, INC.
2535 E. IMPERIAL HIGHWAY
LOS ANGELES 59, CALIF.

For more details circle NED-484 J4 on enclosed inquiry slip

BRANDING IRON
electrically heated, uses marking die

Designed for marking wooden crates or for general use by wood, leather, plastics or rubber workers, Handi-Brander consists of an electrically-heated engraved brass die mounted on a handle. Dies are engraved in accordance with user's requirements, are interchangeable and can be ordered separately. Iron is used with standard 110-v circuit and produces quick, clean and permanent markings. Made by **Acme Marking Equipment Co.**, 8020 Lyndon Ave., Detroit 38, Mich.

For more details circle NED-485 J4 on enclosed inquiry slip

MOTORIZED HARDNESS TESTER
features short test cycle

Semiautomatic in operation, the model Y Rockwell motorized hardness tester features an illuminated dial gage, indenter light and Set-O-Matic dial gage. Motor's function in the test cycle is to remove the major load. Cycle of major load operation is less than 2 seconds. A dashpot gives infinitely variable speed control. Tester is furnished with 1/16-in. steel ball penetrator chuck, set of anvils and dead weights for applying 60, 110 and 150 kg major loads. It has two B scale and two C scale test blocks. Made by **American Chain & Cable Co.**, Wilson Mechanical Instrument Div., Dept. NED, 929 Connecticut Ave., Bridgeport 2, Conn.

For more details circle NED-486 J4 on enclosed inquiry slip

PACKING GLAND
bores are from 1/2 through 3/4-in.

Model PG-5 packing gland provides pressure seal without damage to tube or other sealed element entering a pressure system. This is accomplished by compressing such soft sealant materials as Teflon, asbestos-graphite and Lava around the element to form a positive, leak-tight joint. When Lava is used as sealant, gland can be used for temperatures exceeding 1500° F. Gland is made from stainless steel and is available with standard bore diameters of 1/2, 5/8 and 3/4-in. It can be supplied in any intermediate bore. Standard mounting thread connection is 3/4-in. IPS. Design permits point of seal to be adjusted without loss of system pressure. Made by **Conax Corp.**, 4513 Main St., Buffalo 21, N. Y.

For more details circle NED-487 J4 on enclosed inquiry slip

SPRAYING SYSTEMS CO.

SPRAY NOZZLES

exact performance for every need

Choice of thousands of standard spray nozzles gives you exact spray pattern, capacity, impact and atomization. PROMPT . . . often immediate delivery from stock.

BE SURE TO WRITE FOR . . . . the most complete spray nozzle catalog ever printed . . . forty-eight pages of detailed information. Write for your free copy of Catalog No. 24.

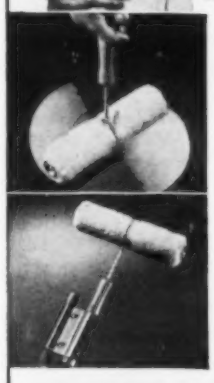
SPRAYING SYSTEMS CO.
3211 Randolph Street • Bellwood, Illinois

For more details circle NED-488 J4 on enclosed inquiry slip

New 2-Headed Roller
cuts plant painting time 52%

BESTT DUO-MECHANIC
Industrial Rollers
designed for PROFESSIONAL PAINTERS

New Twin head roller furnished in four sizes!



Exclusive T construction provides perfect balance—cuts fatigue differential action eliminates skid marks. Ideal for fences—concrete—plaster—dry wall construction.

Your order will be shipped through your nearest BESTT DISTRIBUTOR

All covers are 12/16" Lambskin

8"—No. 800	$4.89
11"—No. 1100	5.40
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Also available in heavy duty model with Hardwood Cores.

Replacement covers available in 7/16"—12/16"—16/16" Lambskin and 7/16"—12/16" Dynel.

DEPT. B

BESTT ROLLR INC. P. O. BOX 551, FOND DU LAC, WIS.

For more details circle NED-489 J4 on enclosed inquiry slip

UNBRAKO precision ground alloy steel DOWEL PINS

2 STANDARDS MEET MOST REQUIREMENTS

UNBRAKO Dowel Pins are regularly furnished in two *standard* types: blue label pins, +.0002" oversize for nominal press fit requirements; red label pins, +.001" oversize for use as repair pins. They feature formed ends which won't chip, a 6 microinch surface finish, and a diameter tolerance of ±0.0001". Stocked and sold by leading industrial distributors everywhere. Write for literature. STANDARD PRESSED STEEL Co., Jenkintown 24, Pa.

UNBRAKO SOCKET SCREW DIVISION

SPS JENKINTOWN PENNSYLVANIA

For more details circle NED-490 J4 on enclosed inquiry slip

take the back-breaking LIFT out of the Heavy Jobs with . . .

Other WELD-BILT Equipment:

Portable Lift Table for loads to 2000 lbs.

Heavy Duty Lift Table, Electric or Manual Control.

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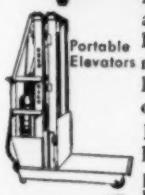
HYDRAULIC LIFT TABLES

Now heavy dies, sheet steel, big machined parts are *easy* to handle — with WELD-BILT Hydraulic Lift Tables. Simple to adjust to loading height, move to press or machine position, and raise or lower to comfortable working position — without heavy lifting.

Heavy Duty Lift Tables, for loads up to 10 tons, have foot pedal and push button control, or foot pump. Portable Lift Table handles loads to 2000 lbs. Write for bulletin and prices.

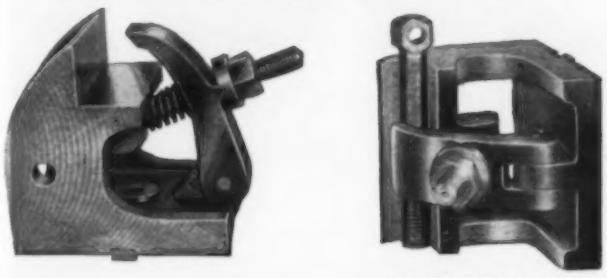


WEST BEND EQUIPMENT CORP.
Materials Handling Engineers
311 Water Street • West Bend, Wisconsin

For more details circle NED-491 J4 on enclosed inquiry slip

• HART •
MILLING FIXTURES
MASTERS OF 1000 SETUPS

ELIMINATE 1000 NEEDS FOR SPECIAL—
AND EXPENSIVE JIGS AND FIXTURES



USED IN VERTICAL POSITION

HART MILLING FIXTURES make themselves popular and profitable in any shop—are used in either horizontal or vertical position. Will hold round, hexagonal, octagonal, or square stock, aligning the work with the machine. Grip holds the work on bottom as well as on back. Generally sold in pairs. Made in 4 sizes—to hold stock from ½ to 5 inches.

Write for new bulletin.

WALTER W. FIELD & SON INC.
39 HAYWARD STREET, CAMBRIDGE 42, MASS.

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SHELDON
CHICAGO U. S. A.

OFTEN PAYS OUT ON THE FIRST JOB...
and gives additional years of "cost free" service.

In the past, lathes were generally bought as large and as heavy as possible to insure accuracy and sufficient power. Now, with accurate, low-cost Sheldon Precision lathes, it is more profitable to buy these faster, cost-cutting lathes for the specific job at hand just as you would buy jigs and fixtures.

In savings of tooling costs, operator cost, power cost, and plant loading, as well as extra profits from more pieces per hour, Sheldon lathes often pay back their cost on a single run.

Sheldon lathes will work to the closest tolerances—have "Zero Precision" Taper Roller Bearings. They can take a healthy cut when operating at high speed direct drive—have double V-belts to the spindle. They will swing 10", 11" or 13" and have a 1⅜" hole through the spindle—have sufficient capacity for the great bulk of lathe work. Sheldon lathes have created a new factor for figuring machinery costs. They are tools you should know about.

Write for Catalog

SHELDON MACHINE CO., INC.
4215 N. Knox Ave. Chicago 41, Illinois

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PRIVATE STORAGE in Half the Usual FLOOR SPACE!

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2-PERSON LOCKER UNIT

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Each 15" wide x 21" deep all-steel unit provides *two* sets of individual, interlocking hat and coat lockers. Unique design takes up no more area than many single-person lockers! Pays dividends in higher employee morale, efficiency—at low cost per person!

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INCONVENIENCE
LACK OF PRIVACY
PETTY THEFTS!

A Complete Line of Steel Lockers, Shelving, Cabinets

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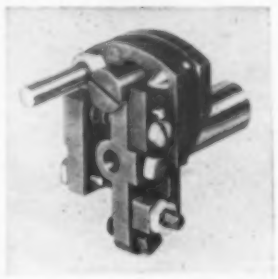
RECESSING TOOL
for automatic screw machines



Amcam model B recessing tool moves radially into the work, performing either radial or form recessing, back end chamfering without a cross slide, or swing recessing from a cross slide without changes or adaptations. The automatic screw machine tool is cam actuated by forward motion of the turret. Cam action holds close tolerances throughout long runs without adjustment. Need to synchronize lead and cross slide cams is eliminated. Made by **American Cam Co.,** Dept. N, Hartford 1, Conn.

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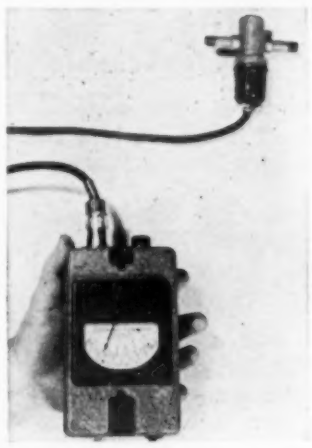
ELECTRONIC FLOWMETER
range is 50 to 10,000 cc per min.



Designed for use in process control and for making line checks, electronic flowmeter is small enough to be held in the palm of the hand. It gives instantaneous direct readings of gas flow over a 50 to 10,000 cc per minute range. Unit, which can be used for remote indication, has a ½-second response time and 2 per cent accuracy. It can be calibrated for measurement of mass flow in pounds of air or gas. Gage tube employs standard ⅛-in. IPS male thread. Made by **Hastings Instrument Co.,** Hico Instruments Div., Warwick 2, Va.

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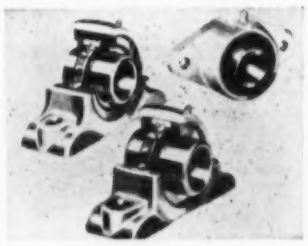
PILLOW BLOCKS & FLANGES
improved with lube gun fitting



All regular and rubber insulated ball bearing pillow block and flange mountings in the ED series are now equipped with double setscrews for permanent shaft locking. Additional improvement is a standard gun type of lubricant fitting. Line is intended for light duty application and includes the ED pillow block, FED flange and EDR rubber-insulated pillow block with rubber mounting. Made by **Ahlberg Bearing Co.,** 3011 W. 47th St., Chicago 32, Ill.

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Turn to this book for a better way to push, flip, raise, lower and release material. Fully explained are the revolutionary thrust techniques of Westinghouse Motocylinders. See how these compact drive units give you greater precision and economy together with far less maintenance than your present material-handling method. The simplicity of Motocylinder installation and operation is clearly shown . . . no steam or hydraulic systems involved.

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adjustable metal framing solves complex pipe supporting...

VERSATILE SYSTEM INSTALLS QUICKLY, ON THE JOB... SAVES TIME AND MONEY

UNISTRUT framing is the ideal solution for supporting piping or conduit in difficult spots. This quick-erected system is simply cut and bolted together, custom fit to the job. No welding, drilling or skilled labor required. UNISTRUT framing reduces engineering detailing and installation time. And it is completely adjustable, permitting alterations or changes at any time.

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84 pages, electrical and mechanical installations with UNISTRUT framing

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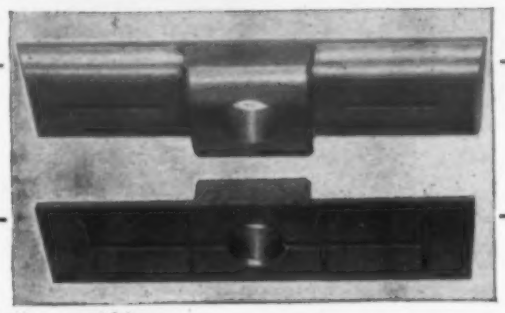

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Protect the shaft or other moving parts from injury, scoring, and seizing due to temporary interruption or failure of lubrication, and at the beginning and end of a run, when the speed of rotation is insufficient to maintain the oil film.

They will not powder under the most severe conditions of service. Available rough cast or machined to precisely controlled tolerances. They can be machined at surface speeds up to 875 lineal feet per minute.

Castings to your patterns—any size, shape or section—delivered as scheduled and specified. Pattern making, designing and machining when required.

Write today for free literature and service data sheets. Send blueprints, conditions of operation and other data for recommendations and quotations. You are invited to discuss your bearing problems with our metallurgists, engineers, and laboratory technicians.

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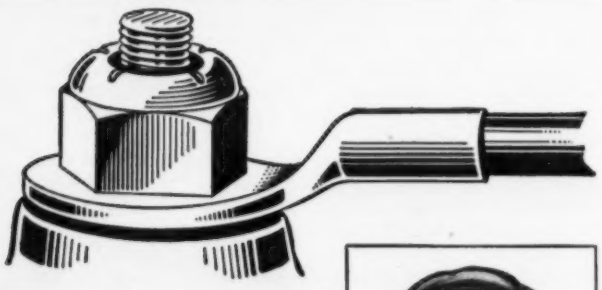
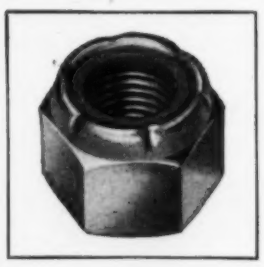


Vibration-proof electric terminals



Self-locking brass Elastic Stop® nuts provide positive protection against the loosening effects of vibration. The red elastic locking collar provides a constant grip on terminal studs . . . prevents ignition or power supply failures. Because Elastic Stop nuts remain tight in any position on the stud—whether firmly seated or not—they are easily adjusted. One-piece fasteners, readily removed and re-used.

Write ESNA® for the most practical answer to your fastener problem. Address Dept. N57-953.

ESNA

ELASTIC STOP NUT CORPORATION OF AMERICA
2330 Vauxhall Road, Union, N. J.

DESIGN HEADQUARTERS FOR SELF-LOCKING FASTENERS

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ULTRASONIC GENERATOR
tunable over wide frequency range

Rich - Roth 400-w ultrasonic energy generator and a variety of transducers are suitable for production or laboratory degreasing, emulsifying, impregnating, degassing, dispersing, coagulating, extracting, fragmenting, and depolymerizing. Generator is continuously tunable over frequency range from 10 to 1200 kc per second. Various output impedances couple generator to piezoelectric and magnetostrictive transducers, types of which include metal jacketed, flanged flow-through chamber for installation in a pipe line and expendable units. Made by **Rich-Roth Laboratories,** Dept. NE, 1240 Main St., Hartford, Conn.

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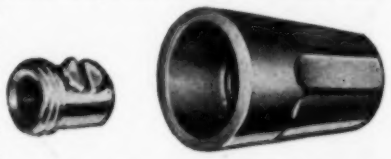
SET SCREW WIRE CONNECTOR
screwdriver-applied unit is reusable

High-dielectric shell of compounded phenolic material, an inner solid brass sleeve and a set screw comprise corrosion and vibrationproof set-screw wire connector which requires only a screwdriver for application. Stripped wire ends are inserted in sleeve and set-screw tightened. Surplus wire is clipped off and shell screwed down tightly over threaded end of sleeve. Three sizes are available for various wire combinations, including four No. 18 wires, six No. 14, two No. 10 and one No. 12 wire. Two larger sizes, 11 and 22 are listed for 600-v connection, while smallest No. 10 size is a 300-v connector. Units can be reused when making circuit changes. Made by **Ideal Industries, Inc.,** 1032 Park Ave., Sycamore, Ill.



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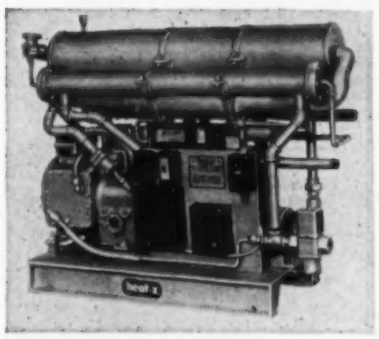
PACKAGED LIQUID CHILLERS
available in 2 through 15-hp models



Line of package chillers for chilled water air conditioning systems, drinking water, beverage cooling or other industrial water cooling uses is furnished wired, charged with Freon and tested, requiring only power and water connections for operation. PC models are available in 2 through 15-hp sizes. Compactly designed units have nonoverloading circulating pumps and hermetic compressers. Operation at 50 per cent capacity is possible with the 10 and 15-hp models. Made by **Heat-X-Changer Co.,** 10 N. Main St., Brewster, N. Y.

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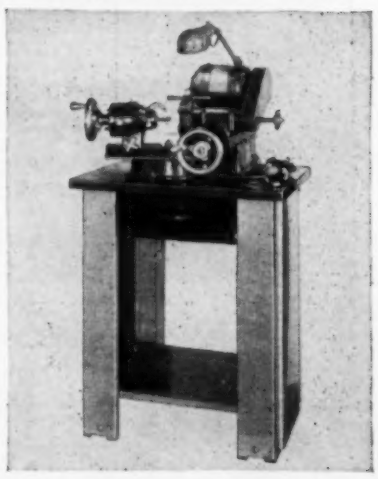
TAP GRINDER
designed for sharpening chamfers



Available for floor stand or bench operation, model 1300 tap grinder is specially developed for chamfer sharpening. Capacity is from No. 0 machine screw to 1½-in. hand taps and from ⅛ to 1-in. pipe taps with left or right hand threads and various numbers of flutes. Sharpening heads are made in two sizes. Each revolution of the wheel grinds and relieves all lands. Relief is controlled by adjusting screws through the back of the head. Made by **Henry P. Boggis & Co.,** 706 E. 163rd St., Cleveland 10, O.

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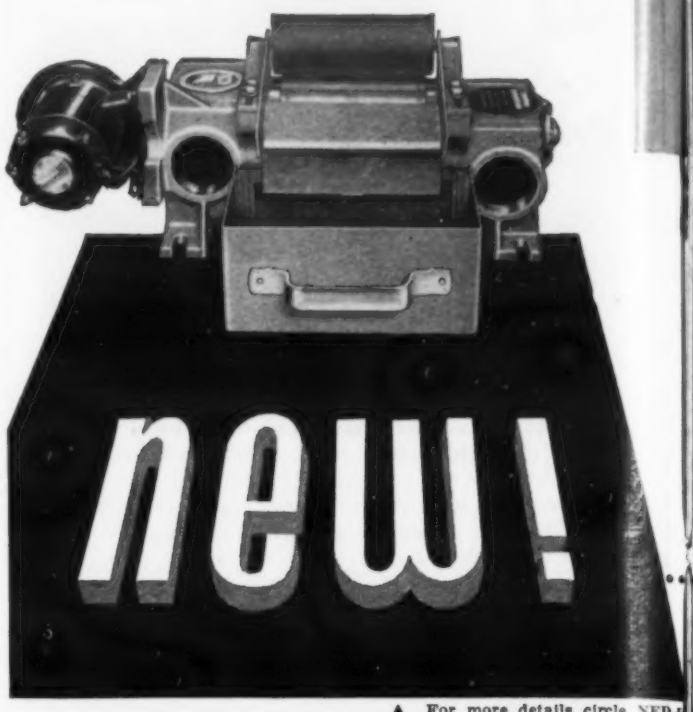
Houdaille Mag



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Mass-Position

MATERIAL AT WORK LEVEL

- Giant 47.2 cu. ft. vertical storage hoppers feed *automatically* at work height.
- Fork truck operator fills hoppers *mechanically,* from any one of 8 directions, using Work-O-Matic drop-bottom box.
- Box stored under hopper increases storage to 67.4 cu. ft.—sufficient for full work periods in most operations.
- Eliminate need for in-process storage areas and costly re-handling, releasing fork trucks for other use.

Work-O-Matic Gravity-Fed Hoppers can save time and speed production in your plant. For details write to The Union Metal Manufacturing Company, Canton 5, Ohio.

*Patent No. 2,445,038. Other patents pending.

UNION METAL Mate

▲ For more details circle NED- J4 on

most PRACTICAL unit pillow block you can buy

Let your SKF Distributor show you the "SY" Unit Pillow Block—the *one* that offers all the easy-maintenance features you've wished for.

Rotating Flinger, Seal to effectively

ACTION!

Write for Bulletin 370, with complete description, dimensional tables, available sizes, weights, etc.

The "SY" Unit Pillow Block is interchangeable with existing installations by bolt hole spacing and center height features. Self-aligning bearing.

SKF INDUSTRIES, INC., PHILADELPHIA 32, PA.
—*manufacturers of* SKF *and* HESS-BRIGHT® *bearings.*

SKF INDUSTRIES, INC.
Front St. & Erie Ave., Philadelphia 32, Pa.

Send Bulletin 370. I'm interested in pillow blocks for _____
_____ (specify)
Name _____ Title _____
Company _____
Address _____
City _____ Zone _____ State _____
Type of plant _____
Approx. number pillow blocks in service _____

▲ For more details circle NED- J4

Magnetic separator

FOR AUTOMATIC, LOW-COST REMOVAL OF FERROUS METALLIC PARTICLES FROM COOLANTS AND CUTTING OILS

used in
• GRINDERS • MILLING MACHINES • GEAR SHAPERS • DRILLING MACHINES
• TURNING MACHINES • BROACHING MACHINES • and many others

NOW . . . a *completely new* Magnetic Separator designed to remove ferrous metallic particles and sludge from liquid coolants, mineral oils and soluble oil solutions used in all types of metal finishing operations. Automatic, continuous cleaning of coolants with the Houdaille Magnetic Separator means:

- Increased Production
- Longer Wheel & Tool Life
- Better Finishes with Fewer Rejects
- Greater Safe-Use Life of Oil or Coolant
- Lower Operating and Maintenance Costs

important features:

Easy Installation on Machine Tool Sump — Flexible design permits choice of three inlets and two outlets. Small, compact unit requires little or no extra floor space.

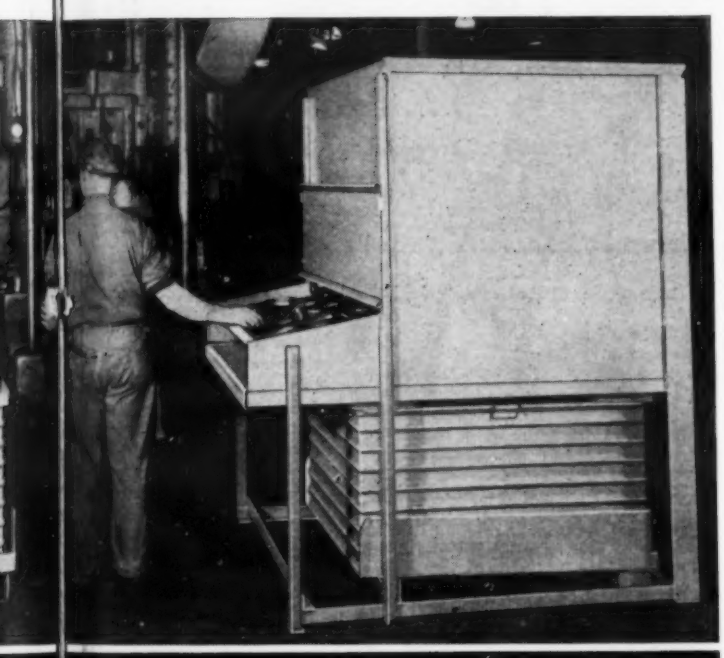
360° Constant Magnetic Attraction —Permanent ring magnets enclosed in revolving cylinder provide 360° of magnetic attraction. Evenly distributed; no spottiness.

Economical, Trouble-Free Operation—Separator uses 1/70 hp. gear head motor (TENV). Features smooth, automatic operation. Nothing to lubricate, nothing to get out of order.

Write today for Equipment Bulletin giving complete details.
HONAN-CRANE CORP. 405 Wabash Ave., Lebanon, Indiana
a subsidiary of **HOUDAILLE-HERSHEY CORP.**

NED-5[illegible] J4 on enclosed inquiry slip ▲

RAVITY-FED HOPPERS



Material Handling Equipment

e NED-[illegible] J4 on enclosed inquiry slip ▲

it
uy

SKF®
BEARINGS AND PILLOW BLOCKS

[illegible] NED-[illegible] J4 on enclosed inquiry slip ▲

FLUORESCENT LAMP
8-ft rapid start type

Light at efficiency of 70 lumens per watt is produced by this 100-w fluorescent lamp. Measuring 8 ft long, it is of the rapid-start type and has an approximate initial brightness of 2560 ft Alamberts. Rated life on a 3-hour cycle is 7500 hours. Lamp is standard cool white color, with others to be available. Because of its relatively high loading, it operates most satisfactorily in well-ventilated fixtures. Made by **Sylvania Electric Products Inc.,** Dept. 2-NED, 60 Boston St., Salem, Mass.

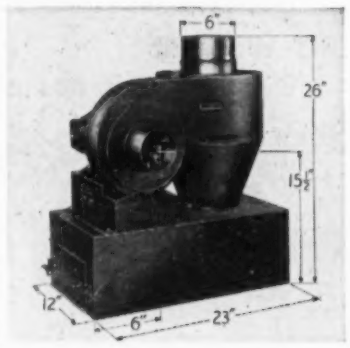
▲ For more details circle **NED-511 J4** on enclosed inquiry slip ▲

UNIT HEATER
capacities up to 228,000 Btu/hr

Horizontal propeller fan unit heaters are designed to provide comfortable outlet temperatures in high pressure, high temperature steam systems. They can be used on steam systems up to 125 psig and have 2 psig outlet ratings. Capacities range from 385 to 5430 cfm (70° F air), 17,400 to 228,000 Btu/hr (with 60° F entering air and 2 psi steam pressure). Heaters are also suitable for use without modification with forced hot water heating systems. They are available with single or two-speed fully-enclosed motors. Castings have horizontal directional louvers as standard with vertical deflection louvers optional. Made by **American Air Filter Co.,** 391 Central Ave., Louisville 8, Ky.

▲ For more details circle **NED-512 J4** on enclosed inquiry slip ▲

COMPACT DUST COLLECTOR
558 cfm unit can be caster-mounted



Model 5N20 dust collector can be used to control several dust sources on an alternate basis. It is available with caster mounts and quick-action connecting clamps if desired. Compact unit is rated at 558 cfm on a 4-in. inlet. Multiple-blade paddle wheel type self-clearing fan is direct driven by a continuous-duty ⅓-hp motor. Dust is centrifuged out of inlet air and is retained in a compartment which comprises the entire base of the collector. Cleaned air, gases, smoke and obnoxious odors are exhausted outdoors through a 6-in. diameter connection. Made by **Aget-Detroit Co.,** 201 Main St., Ann Arbor, Mich.

▲ For more details circle **NED-513 J4** on enclosed inquiry slip ▲

PRECISION BORING HEAD
adjusts to 0.0001-in. on diameter

Designed for either toolroom or production work, Deka-Bore precision boring head can be used on fixed and rotating applications. Offset dovetailed tool holder slide is adjusted by a conventional micrometer screw for roughing-in the hole. It has a predetermined pressure factor bearing on the gibs to eliminate backlash. Tool body is calibrated also, to provide direct-reading adjustments of 0.0001-in. on a diameter or 0.00005-in. on a radius. Heavy-duty tool is optionally available with choice of shanks. Made by **Precision Tool & Mfg. Co.,** Dept. NED, 1305 S. Laramie Ave., Cicero 50, Ill.

▲ For more details circle **NED-514 J4** on enclosed inquiry slip ▲

"AMF De Walt saves us 80% on maintenance time and labor!"
says Marty Kule, Lezius-Hiles Printing Company, Cleveland, Ohio

"A typical job AMF De Walt® did for us was cutting and drilling lumber for 20 stock trucks. All the 1¼" pieces of lumber for one truck were cut and drilled in 1½ hours. Without AMF De Walt, the job used to take 8 hours. What's more, each came out accurate, alike, and required no finishing. The savings on this job alone half paid for our AMF De Walt!"

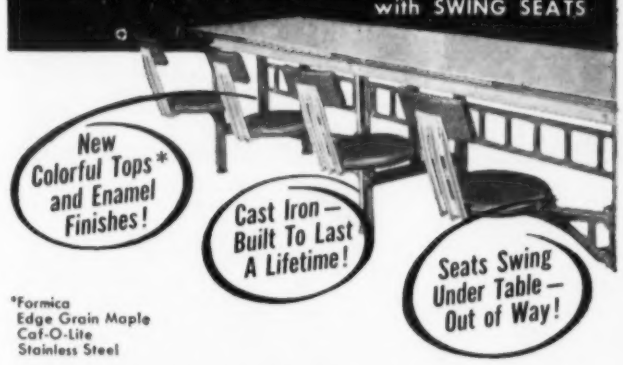
Versatile, economical, does all jobs. Fast, safe, accurate, compact. Prices start at $229 for ½ H.P. model. Send for catalog to De Walt Inc., Dept. NED-54-9 Lancaster, Pa.

De Walt Inc. Lancaster, Pa.
DE WALT
POWER SAWS
In Canada: De Walt Canada Ltd., Guelph, Ontario

Subsidiary of AMERICAN MACHINE & FOUNDRY COMPANY, *New York*

▲ For more details circle **NED-515 J4** on enclosed inquiry slip ▲

INDUSTRIAL AND INSTITUTIONAL
SECTIONAL TABLES
with SWING SEATS



*Formica
Edge Grain Maple
Caf-O-Lite
Stainless Steel

MAXIMUM SEATING CAPACITY IN LIMITED SPACE!

Colorful tops and wide range of enamel paint finishes add attractive new color to industrial and institutional dining rooms and recreation rooms. Units seat 4 to 24 people. Attached seats (with or without backs) swing under table to eliminate crowding, noise and confusion of loose chairs and tables. Ideal for industry, schools, hospitals and institutions.

WRITE TODAY For NEW Catalog!

DISTRIBUTORS IN ALL PRINCIPAL CITIES
The Chicago Hardware Foundry Co.
"Dependable Since 1897"
1994 Commonwealth Ave.
North Chicago, Ill.

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In 1 minute

The Verifax method, Kodak's sensational new office aid, gives you—

3 copies

of any letter or other office record—legible, dry, photo-exact—and made . . .

on ordinary paper

instead of on specially treated paper. These 3 copies are produced from but *one* sheet of Verifax Matrix Paper for

only 4¢ apiece

which is real copying economy!

Only equipment needed is the compact Verifax Printer . . . priced at low $240. Amazingly simple to operate . . . can be used under present lighting.

Save now! Write for free Verifax booklet and names of near-by dealers.

EASTMAN KODAK COMPANY
Industrial Photographic Division
Rochester 4, N. Y.

Price quoted is subject to change without notice.

Kodak

▲ For more details circle **NED-517 J4** on enclosed inquiry slip ▲

with....

CONE-DRIVE double-enveloping Worm Gear Speed Reducers!

'Double-enveloping'—wrapping worm and gear around each other—is the secret of Cone-Drive gear's compactness.

As a result, smaller gears can be used to carry a load when you specify Cone-Drive gears—up to ⅓ smaller housings, too.

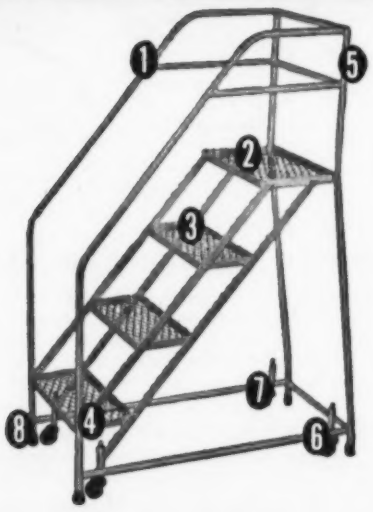
If space saving is a design need, it will pay you to look into Cone-Drive gears and reducers . . . NOW.

Ask for Bulletin 8901-50

CONE-DRIVE GEARS
DOUBLE ENVELOPING GEAR SETS & SPEED REDUCERS
Division Michigan Tool Company
7171 E. McNichols Road • Detroit 12, Michigan

▲ For more details circle **NED-518 J4** on enclosed inquiry slip ▲

ONLY BALLYMORE Safety Step LADDERS GIVE YOU ALL THESE ADVANTAGES!



1. **GUARD RAILS**... Users feel safe up on Ballymore Ladders, surrounded by sturdy guard rails which *really* support and protect.
2. **SAFETY TREAD**... Special non-skid design provides sure footing all the way.
3. **SELF-CLEANING**... Treads can't clog with dirt, grease, or liquids.
4. **LIFETIME WEAR**... All welded-steel heavy-duty construction; no rivets or bolts, nothing to loosen or wear out.
5. **STRENGTH OF STEEL**... Tubular cross-section assures high strength with light weight.
6. **AUTOMATIC ACTION**... Just step on a Ballymore and it locks to the floor. No levers to pull, no wing nuts, no locks. Nothing to handle or think about. Acts for you.
7. **EASY PORTABILITY**... when you step off, ladder rolls easily on four large-diameter casters.
8. **MAXIMUM STABILITY**... Rubber-tipped feet at extremities of ladder eliminate any tendency to wobble, roll, or "kick out".
9. **COMPLETE RANGE OF SIZES** FROM ONE TO THREE STEP WITHOUT GUARD RAILS; TWO TO EIGHT STEPS WITH GUARD RAILS.

INSIST ON ORIGINAL
Safety Step LADDERS

Send for FREE Catalog
BALLYMORE COMPANY
WAYNE 3, PA.

Please send me my copy of full illustrated Ballymore Catalog showing complete line of original BALLYMORE ladders.

NAME_____
COMPANY_____
ADDRESS_____
CITY_____ZONE____STATE_____

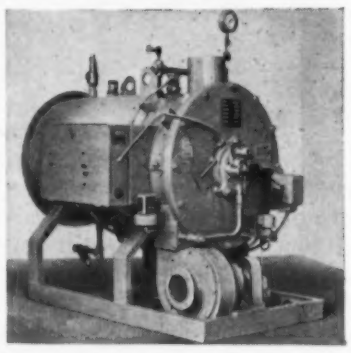
▲ For more details circle **NED-519 J4** on enclosed inquiry slip ▲

ULTRASONIC THICKNESS GAGE
also detects flaws and lack of bond

Thickness of metals, glass, rigid plastics and other materials may be determined with the Vidigage, an automatic ultrasonic gage. It incorporates a 21-in. television tube which allows for scales 17 in. long. Gage will detect laminar flaws, including lack of bond, from one side of the work. Sweep-width adjustment permits an almost infinite choice of directly read thickness scales, in thicknesses from 0.012 to 2.5 in., with accuracies as high as 0.1-in. Thicknesses from 2.5 to 10 in. can be calculated. Oscillator assembly can be located at a distance of 100 ft from the cabinet. Made by **Branson Instruments, Inc.**, Dept. A, 430 Fairfield Ave., Stamford, Conn.

▲ For more details circle **NED-520 J4** on enclosed inquiry slip ▲

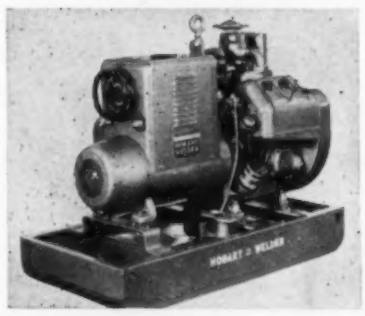
STEAM GENERATOR
seven sizes from 15 to 60 hp



Automatic source of steam or hot water in small quantities is provided by the model TP packaged steam generator. It is made in seven sizes from 15 to 60 hp (15 to 200 psi pressure) for firing with light oil, gas or light oil-gas combination. It is fully piped and wired, requiring only connection to the buyer's service lines and breeching or stack. Smallest unit measures 71 x 35 x 54 in. All models meet ASME and National Electrical codes and carry UL label. Made by **Ames Iron Works, Inc.**, Box 45, Oswego, N. Y.

▲ For more details circle **NED-521 J4** on enclosed inquiry slip ▲

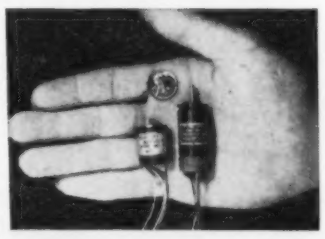
ARC WELDER
250-amp unit has air-cooled engine



A four-cylinder air-cooled engine powers this Multi-Range direct current arc welder, directly connected to the 250-amp generator. Control panel mounts range wheel, volt-amp adjuster knob, reinforced bus bar cable, terminals, power outlet receptacles and starter button for battery-equipped units. Engine controls are located at the engine end of the generator for convenience. Power outlet provides 2 kw dc at 70 v when unit is not being used as a welder. Made by **Hobart Brothers Co.**, Dept. 205-h, Troy, O.

▲ For more details circle **NED-522 J4** on enclosed inquiry slip ▲

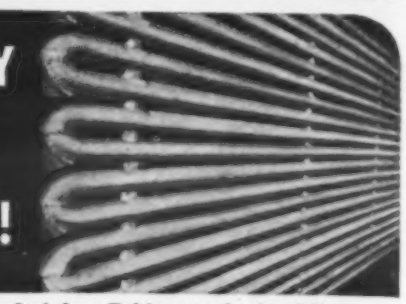
SERVO SYSTEM COMPONENTS
compact units are ¾-in. diameter



"Penny Size" servo system components have straight - through bore and integral stator-housing construction. Smaller of units illustrated measures ¾-in. diameter and 15/16-in. long. No-load speed is 6500 rpm, stall torque 0.1 oz-in. and weight 1.2 oz. Another motor is available in same size but with high inherent damping for simple instrument servos. Sensors and detectors for use with these motors measure ¾-in. diameter, 1.658-in. long and weigh 1.75 oz. They have maximum error limits of 10 minutes from electrical zero. A servo amplifier the size of a cigarette pack and precision gear trains complete line of components. Made by **Kearfott Co.**, Dept. N, 1378 Main Ave., Clifton, N. J.

▲ For more details circle **NED-523 J4** on enclosed inquiry slip ▲

NEARLY $1000 SAVED!



...and Carpenter Stainless Tubing made the difference.

FOR PRODUCTION EQUIPMENT—ten cooling coils like this were made from Carpenter Stainless Tubing at a saving in material of about $1000 because uniform walls permitted a lighter gauge.

GET THESE NEW FACTS!

Just off the press is the new Carpenter Condensed Data File. Packed with facts on properties, corrosion resistance, weights, dimensions. Tells the story of Carpenter quality—Carpenter uniformity. Write for your copy, *today*.

THE CARPENTER STEEL COMPANY
Alloy Tube Division, Union, New Jersey

▲ For more details circle **NED-524 J4** on enclosed inquiry slip ▲

New Bond S-L-U* DRUM TRUCK
. . . for faster, easier handling

- Spring action chime hook.
- Floating axle with rolling motion.
- Rugged all steel welded construction.
- Two wheel types: vulcanized-on rubber tread or semi-steel.
- Rests in tilted position for maximum drainage.
- Stands upright for safe storage.

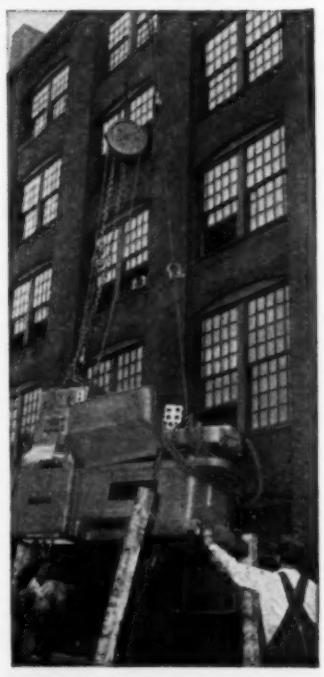
The *new* Bond *Self-Loading and Unloading Drum Truck takes "the work" out of lifting, moving and draining either drums or barrels . . . and speeds the job at that! Like every hand truck in the full Bond line, this drum truck is designed and built to give extra service, extra satisfaction!

Write today for your copy of Bond Bulletin R-61 . . . it gives all the facts on the new Bond Drum Truck.

BOND FOUNDRY & MACHINE COMPANY
Manheim, Pennsylvania

▲ For more details circle **NED-525 J4** on enclosed inquiry slip ▲

Riggers find another use for Harrington Peerless Hoists



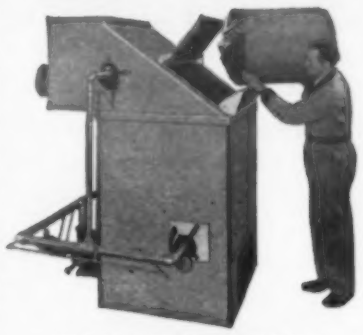
Lowering heavy machinery from a multistoried building was greatly simplified when the riggers used a Peerless Model C Hoist on one leg of the sling. This unique arrangement permitted them to keep the load in balance during the entire operation, saved them much time and labor leveling and moving the equipment. Peerless Hoists can handle most of your hoisting requirements. For more information, see the classified telephone directory for the name of your nearest Harrington distributor or write us.

THE HARRINGTON COMPANY
Makers of Hoists since 1876
GRAVERS ROAD AT THE TURNPIKE, PLYMOUTH MEETING 16, PA.

▲ For more details circle **NED-526 J4** on enclosed inquiry slip ▲

NEW WINNEN INCINERATOR

is smokeless . . . odorless . . . pays for itself in less than a year!



The New Wincinator C-2-20
Note extra-size feed doors

Now Winnen Incinerators are available in an additional line . . . the Model C-2. Downdraft in design, it is smokeless and odorless. Made in 10, 15 and 20 bushel sizes, the C-2 conforms to the most rigorous building codes everywhere. It's designed to burn wet and dry refuse without smoke or odor.

Fuel is pressurized to multiple burners for both primary and secondary combustion. Thoroughly tested while burning fish, rubber, etc. Available with a choice of fuels, Wincinators are so well designed that they consume all burnable material to a fine white ash. Available without any fuel for burning dry refuse only.

Thousands of satisfied users tell us their Wincinators saved garbage and refuse hauling charges . . . paid for themselves in less than a year! Operating costs are surprisingly low. Fuel and power are used only when needed since an automatic timer (optional equipment) controls operation during preselected intervals. Completely equipped with latest safety devices. Automatic fuel controls, prefab chimney and other optional equipment are also available.

Wincinators are shipped knocked down, direct from factory with complete easy to follow instructions for installing. Any handyman can install in about five hours! No brickwork or masonry needed. Easy to relocate later if you wish. Guaranteed against defective parts for 90 days.

Send for new folder, prices and information. No obligation. Use inquiry card, or write today to **The Winnen Incinerator Co.**, 932 Broadway, Bedford 10, Ohio. *Advt.*

▲ For more details circle **NED-527 J4** on enclosed inquiry slip ▲

DERBY "152"

A DERBY FIRST
Stainless steel cut-off blade, guaranteed for life of machine.

MOST TALKED ABOUT GUMMED TAPE DISPENSER ON THE MARKET!

Derby spent 2 years designing, building and testing the fabulous Super "152". It's a rugged, efficient, gummed tape dispenser with so many big machine features, so many unusual Derby exclusives, that its low price is truly sensational! Dispenses 1" to 3" width tapes in predetermined lengths up to 30".

See your dealer or write Dept. NED

DERBY SEALERS INC. Derby, Conn.

▲ For more details circle **NED-528 J4** on enclosed inquiry slip ▲

PROBLEM: Reduce manufacturing costs and waste in fabrication of electrical contact Spring Clips

SOLUTION: General Plate provided the solution with long continuous length coils of coin silver clad to phosphor bronze . . . a Composite Metal

A manufacturer of television tuners required a contact material for use in the fabrication of narrow and thin contact spring clips. Extremely close tolerances and long continuous lengths were prerequisites.

The problem was presented to General Plate who quickly found the solution with coin silver-clad to phosphor bronze and provided the material in coils up to 20 inches diameter of a single continuous length. This saved the manufacturer many dollars by eliminating idle machine time and reducing waste practically to zero. The coin silver gave a non-porous, long wearing contact surface — the phosphor bronze excellent spring qualities.

You, too, can benefit with General Plate raw stock contact materials. They are available in various combinations, single or double inlay, overlay, single or double edge-lay and Top-Lay. General Plate Composite Contact Materials will save you money and enable you to make contact assemblies superior to those produced by other methods.

In addition to raw stock, General Plate fabricates contacts and complete contact assemblies.

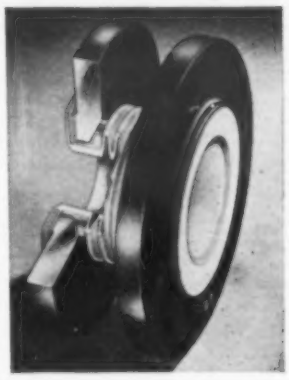
You can profit by using General Plate Composite Metals

METALS & CONTROLS CORPORATION
GENERAL PLATE DIVISION
89 FOREST ST., ATTLEBORO, MASS.

▲ For more details circle **NED-529 J4** on enclosed inquiry slip ▲

TEFLON BELLOWS

fit ½ to 12-in. standard pipe flanges



Chemically inert, corrosion and heat resistant Teflon bellows are available with companion flanges conforming to American Standard bolt hole circles and numbers for pressures up to 125 psi. Pipe size range is ½ to 12-in. Typical applications include vibration dampers, expansion joints and connectors. Bellows are available in wide range of designs for pumps, accumulators, batching scales, hydraulic systems and other installations. They expand and contract in either direction with equal freedom of motion. Operating temperature range is from −94 to 500° F. Made by **Crane Packing Co.**, Dept. NDC, 1800 Cuyler Ave., Chicago 13, Ill.

▲ For more details circle **NED-530 J4** on enclosed inquiry slip ▲

FLOOR MARKER

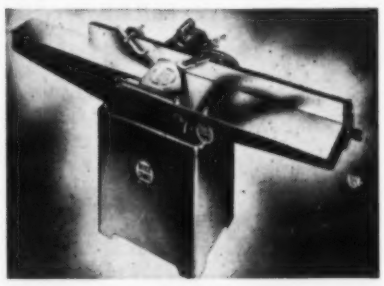
brush cleans floor in front of head

Up to 6-in. wide stripes can be made by Mark-A-Zone paint striping machine. This unit is fitted with a sweeping head which cleans off the area in front of the paint spreader. Spreader heads feed paint automatically when in contact with floor and shuts off when raised. Machine's guide wheels can be raised for curves and when working in close quarters. Paint tank is made from polished chrome steel and is available in 4½ and 6 qt capacities. Made by **S. B. Beugler Co.**, Dept. N, 3667 Tracy St., Los Angeles 39, Calif.

▲ For more details circle **NED-531 J4** on enclosed inquiry slip ▲

LONG-TABLE JOINTERS

feature easily controlled fence

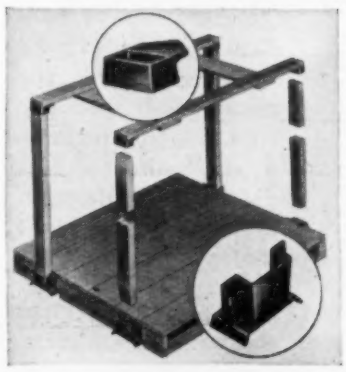


Long U-type hand grip on improved 8 x 84-in. and 6 x 60-in. jointers provides the operator with increased control of the fence. Stock feeds through the machine without interference. Machines are of welded steel construction, are suitable for planing mills and accurate enough for cabinet work. Knife ends are raised by a screw lifter to a micrometer-accurate setting. All cut to the same depth within 0.002 to 0.003-in. The 8-in. jointer has four knives and the 6-in. model has three knives which deliver 14,400 and 10,800 cuts per minute, respectively. Made by **Boice-Crane Co.**, 951 Central Ave., Toledo 6, O.

▲ For more details circle **NED-532 J4** on enclosed inquiry slip ▲

PALLET FITTINGS

permit stacking of standard pallets



Any standard pallet can be made into a stacking-type unit by addition of "V" socket hardware and wooden uprights. With 2 x 4 in. uprights, pallets will tier up to three high with individual loads of 1500 lb or combined load of 4500 lb. Additional load capacity can be obtained by using 3 x 4-in. uprights. Uprights and cross boards are beveled to permit fast assembly. Either cast semisteel hardware, hardware and uprights or hardware, uprights and pallets are available. Made by **Paltier Corp.**, 1705 Kentucky St., Michigan City, Ind.

▲ For more details circle **NED-533 J4** on enclosed inquiry slip ▲

SPEEDY AIR VISE

GRIPPING FORCE 15 TIMES AIR LINE PRESSURE

Speedy Air Vise helps you do dozens of operations faster, better, cheaper—by air pressure! Foot control valve opens and shuts vise instantly, leaving *both* hands free to produce *more!* Jaw opens up to 3 inches, holds castings, parts, jigs, etc. Compact and trouble-free.

Complete with Foot Control, Air Hose and *Fittings*.....only **$36.00**

Prompt Delivery from Your Supplier or Write Direct

W. R. BROWN CORPORATION • 2647 N. Normandy Ave. • Chicago 35, Ill.

AIR REGULATORS • AIR FILTERS • AIR GUNS • PORTABLE COMPRESSORS

▲ For more details circle **NED-534 J4** on enclosed inquiry slip ▲

#5 Ware Room, Tin Plate Mill, Jones & Laughlin Steel Corporation, Aliquippa, Pa.
Aluminum Paint: James B. Sipe & Company

ALUMINUM PAINT IMPROVES INVENTORY CONTROL IN THIS J&L WARE ROOM

Lighting efficiency is an important factor in this J&L Tin Plate Ware Room where inventory is taken each day. According to Clair Figley, J&L Tin Plate Warehouse Foreman, adequate lighting between the high rows of cartons was always a problem. That is, until the roof and supporting structures were painted with highly reflective aluminum paint.

Because of the extra brightness provided by aluminum paint, markings on all cartons are now clearly visible, even in the aisles where there are no lights directly overhead.

Aluminum paint's brightness and high reflectivity make it the ideal coating for industrial uses such as this where good visibility is essential.

ALCOA does not make paint, but ALCOA Aluminum Pigments are used in more aluminum paints than any other brand. Special formulas have been developed by your paint manufacturer to solve individual problems. Paints made to these formulas actually cost you less, last longer, give utmost protection against heat, cold, sun, rain, smoke and fumes. Write us today for FREE BOOKLET, *Painting With Aluminum.*

ALCOA ALUMINUM

ALUMINUM COMPANY OF AMERICA

Paint Service Bureau, Aluminum Company of America
1788-J Alcoa Building, Pittsburgh 19, Pa.
Please send me your FREE BOOKLET, *Painting with Aluminum.*
I plan to paint_____
Name_____
Company_____
Address_____
City_____ Zone____ State____

▲ For more details circle **NED-535 J4** on enclosed inquiry slip ▲

Engineers!

WRITE FOR NEW CATALOG ON MERCURY PLUNGER RELAYS

CARRIES UP TO 60 AMPS.

Motor Loads Up to 3 Hp.

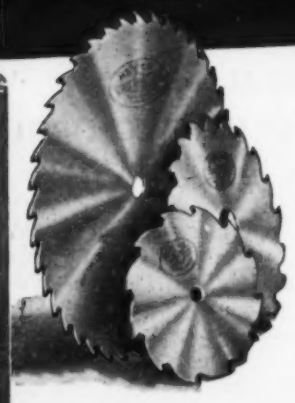
Send for **FREE CATALOG** and 30-day test details

EBERT ELECTRONICS CORP.
212-24 JAMAICA AVE., QUEENS VILLAGE 28, N. Y.

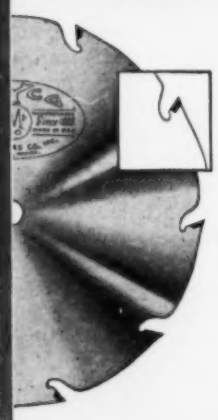
▲ For more details circle NED-536 J4 on enclosed inquiry slip ▲

For that *extra* quality without *extra* cost it's

MEYCO carbide tipped Circular Saws

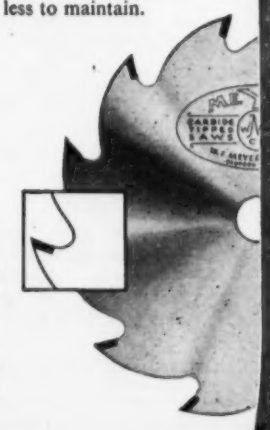


Meyco Carbide Tipped Blades, engineered for tungsten carbide, mean better results for you: A reputation built on finer workmanship and a background of experience.



SAFETY SAW

Meyco Controlled Cut Safety Saws will not grab or kick back —regulates rate of feed—economical, costs less to buy, less to maintain.



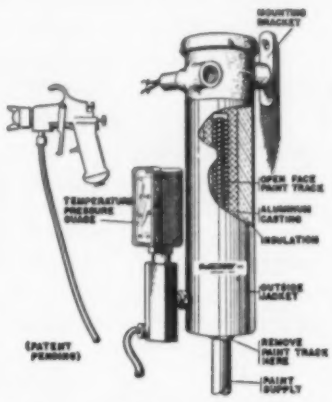
In standard sizes with standard arbors —or made to your specifications for individual applications. Write for descriptive catalog No. 19.

W. F. MEYERS CO., INC.
BEDFORD, INDIANA
MANUFACTURERS OF PRECISION TOOLS SINCE 1888

▲ For more details circle NED-537 J4 on enclosed inquiry slip ▲

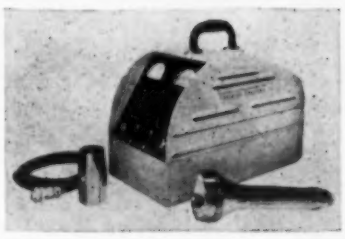
PAINT HEATER
1250-w unit has 8-gph capacity

Removable paint track, one bolt assembly and simplified operation are features of model DH 125 paint heater. Air ambient hose maintains spraying temperature when spray gun is not in use. Heater weighs less than 8 lb and measures 3-in. diameter and 11-in. long. It can be used as a portable unit, or can be permanently bracket mounted. Paint track is freed for cleaning or color changing by removal of a single bolt without disturbing electrical or other connections. Unit is rated at 1250 w and has an 8-gph capacity. It is furnished with pressure gage and thermometer for either 110 or 220 v. Made by **Dualheet, Inc.**, 3352 W. 137th St., Cleveland 11, O.



▲ For more details circle NED-538 J4 on enclosed inquiry slip ▲

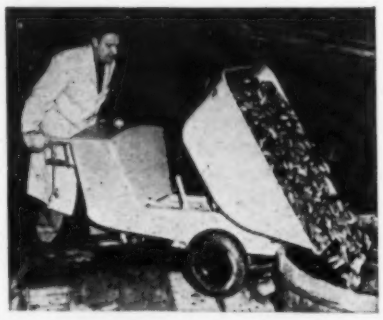
PORTABLE VIBRATION ANALYZER
electronic instrument weighs 24 lb



Model 400 portable electronic vibration analyzer will balance rotating parts at speeds up to 5000 rpm and trace vibration up to 20,000 cpm. Using a stroboscopic lamp, parts are balanced while running at design speed in their own bearings. Vibration analysis is accomplished through electronic frequency and displacement circuits which render data on panel meters. Accuracy to 10 per cent is maintained on all three ranges, 0.001, 0.01 and 0.1-in. full scale. In addition to stroboscopic lamp, analyzer comprises seismic pickup with direct and filtering type probes and a cabinet housing relays, tubes and circuitry. Made by **International Research & Development Corp.**, 172 E. Hosack St., Columbus 7, O.

▲ For more details circle NED-539 J4 on enclosed inquiry slip ▲

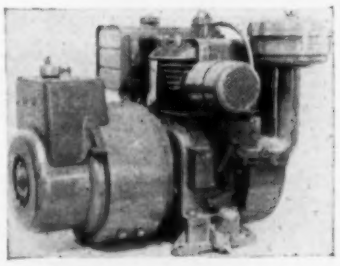
POWERED WHEELBARROW
has stainless steel dump bucket



Stainless steel dump bucket is now available on model 15 Prime - Mover powered wheelbarrow. Bucket permits hauling waste and materials in food processing plants, tanneries and other plants where acids, salts and other corrosive materials are handled. It has liquid capacity of 10 cu ft. Load capacity of mover is ¾-ton up 20 per cent inclines. Bucket is rounded with rolled edges for easy rinsing and cleaning. Made by **Prime-Mover Co.**, Third & Oak Sts., Muscatine, Iowa.

▲ For more details circle NED-540 J4 on enclosed inquiry slip ▲

PORTABLE ELECTRIC PLANT
170-lb unit delivers up to 2200 w



Easily carried in an automobile trunk, the model 41-B portable electric plant features a self-contained 4-qt gasoline tank, ignition system with abundant spark for fast start and optional electric starting. Unit delivers up to 2200 w and measures 21½ in. long and 18 in. high and wide. Four-cycle, air cooled engine of 4.3 hp, operates at 3600 rpm. Armature of the 170-lb plant's heavy duty generator is mounted on the engine crankshaft to eliminate possibility of misalignment from twist and strain. Duplex receptacle on generator is provided. Made by **Universal Motor Co.**, 352 Universal Dr., Oshkosh, Wis.

▲ For more details circle NED-541 J4 on enclosed inquiry slip ▲

COBURN

OVERHEAD CONVEYING EQUIPMENT

Save money... Install it yourself.

Here are the simple ABC's of Coburn's easy and inexpensive installation.

(A) Our engineers make a study of your particular plant layout.

(B) Easy-to-follow plans are then submitted.

(C) These plans, plus Coburn's simplicity of parts and design enable your own plant personnel to set up your overhead conveying system quickly and economically.

Write for Catalog #220 to Coburn Sales and Engineering, 56 Sterling Street, Clinton, Mass.

2598

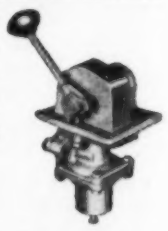
COBURN PRODUCTS
PRODUCTS OF WICKWIRE SPENCER STEEL DIVISION
THE COLORADO FUEL AND IRON CORPORATION

▲ For more details circle NED-542 J4 on enclosed inquiry slip ▲

WESTINGHOUSE PNEUMATIC CONTROL
reduces wear and tear on paper machine

• Thilmany Pulp and Paper Company, Kaukauna, Wisconsin, selected Westinghouse Air Brake Co. Pneumatic Control to assure smooth, shock-free operation of a new paper machine. Westinghouse Valves are used to precisely adjust pneumatic clutches and brakes on the dryer rolls, couch, presses, calendar, and reel.

Wherever you need precise control of linear motion—on brakes, clutches, small presses, positioning devices, sequencing mechanisms, and the like —investigate the possibilities of Westinghouse Pneumatic Control. Our engineers will be glad to help you. Just write, explaining your problem.



Westinghouse Air Brake COMPANY
INDUSTRIAL PRODUCTS DIVISION WILMERDING, PENNA.

Manufacturers of air compressors, pneumatic cylinders, actuators, air control devices of all kinds, engineered pneumatic control systems and front end loaders.

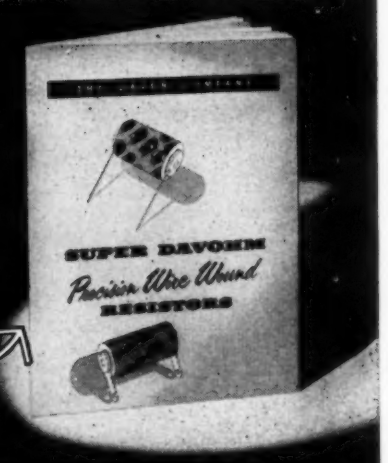
FACTORY BRANCH: Emeryville, Calif.
Distributors throughout the United States . . . See your classified directory.
Distributed in Canada by: Canadian Westinghouse Co., Ltd., Hamilton, Ontario.

▲ For more details circle NED-543 J4 on enclosed inquiry slip ▲

Just off the press . . . and FREE!

DAVEN'S New Resistor Catalog

The most complete catalog ever offered on PRECISION WIRE WOUND RESISTORS



32 pages packed with
- Complete application data on all types of Daven Precision Wire Wound Resistors.
- New charts and data on Resistance Wire, MIL Ratings, Miniature Units, Hermetically-Sealed and Encapsulated types.

Write today for your FREE copy.

THE DAVEN CO.
199 Central Ave., Newark 4, New Jersey
WORLD'S LARGEST MANUFACTURER OF ATTENUATORS

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NEW BAKER "Yardloader"

4000 LB. GAS FORK TRUCK COSTS ONLY $2985

Baker Yardloader now brings cost-saving fork truck operation within the reach of practically every company.

Travel speed approaching 14 miles per hour, large pneumatic tires, exceptionally high ground clearance and oscillating trail axle make it the ideal truck for outdoor service over large unimproved or semi-improved areas.

Heavy-duty industrial engine of proven make, 4-speed transmission and extra-heavy drive axle assure ample power.

Hydraulic lift to 122 inches, automotive-type steer and excellent driver visibility are a few of the features contributing to safety and ease of operation.

Get all the facts—and save up to $1,000.00 on your next gas fork truck.

Baker industrial trucks

THE BAKER-RAULANG COMPANY
1245 WEST 80th STREET • CLEVELAND 2, OHIO

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CUT COSTS WITH EMERSON-ELECTRIC EXHAUST FANS

Bad air is expensive! Cut this cost with Emerson-Electric Exhaust Fans . . . designed for air-moving jobs in commercial, industrial and institutional buildings. Belt- and direct-drive models. Capacities up to 19,350 c.f.m.

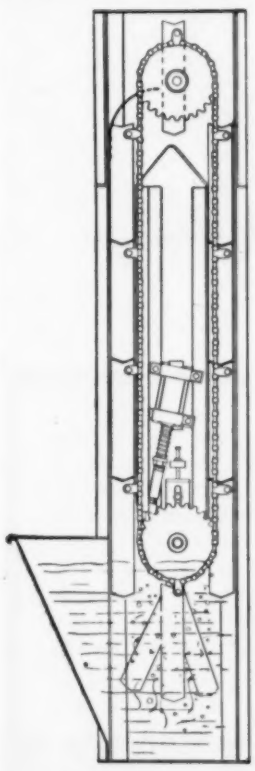
Get ventilation planning data and specifications by writing for Bulletin No. 803.

THE EMERSON ELECTRIC MFG. CO.
St. Louis 21, Mo.

EMERSON ELECTRIC
FANS • MOTORS APPLIANCES

▲ For more details circle NED-546 J4 on enclosed inquiry slip ▲

NEW AIR FILTER SCRUBS ITSELF CLEAN



"pulse-type" action keeps Automaze clean as new

New Automaze air filter stays clean as new as a result of its exclusive "pulse-type" action. It scrubs itself clean automatically. Here's how it works: while each panel in the revolving curtain is submerged in the cleaning tank at the bottom it is agitated vigorously 6 or more times by a compressed air drive. This cleans each panel thoroughly, completely renews the adhesive.

Ordinary air filters may need cleaning once a month. New Automaze goes 3 to 6 months without attention. And then, all you need do is remove the sludge. A special reservoir cover makes this a quick, simple operation.

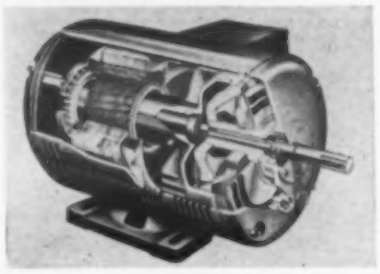
FREE BOOKLET: Send for free booklet for full details on the New Automaze. Write:

AIR-MAZE CORPORATION
25000 Miles Rd., Cleveland 28, Ohio

▲ For more details circle NED-547 J4 on enclosed inquiry slip ▲

ADJUSTABLE SPEED DRIVES

for fractional horsepower service



Fractional horsepower Adjusto-Spede combination power and speed control units are adaptable to business machines, printing and welding machines, wire drawing equipment, conveyors and other diversified applications. They are designed for wall, ceiling or floor mounting and are available in 1/4, 1/3, 1/2 and 3/4-hp sizes. Electronic speed control insures stability to within ±2 per cent of the top speed at any point within the speed range, which is from 0 to 3200 rpm with constant torque. Remote controls can be used, located as far as 100 ft away if desired. Drives are available for standard single and three-phase power. Units are an integral combination of constant speed induction motors, eddy current couplings and electronic speed controls. Made by **Eaton Mfg. Co.**, Dynamatic Div., Dept. NED, Kenosha, Wis.

▲ For more details circle NED-548 J4 on enclosed inquiry slip ▲

HAND LIFT TRUCK

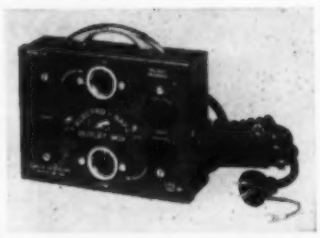
hydraulic unit lifts 1/4-ton

Two-wheeled hand truck embodies a lever-operated hydraulic pump for lifting loads up to 1/4-ton in weight. In the down position, lifting platform is at floor level. Unit is suitable for loading and unloading trucks, stacking and moving dies and other heavy components. Four-speed pump ram permits lifting speed to be regulated in accordance with load. Lifting height is 26 in.; platform is 16-in. long and 20-in. wide. Roller bearing wheels have 8-in. Moldon rubber tires. Made by **Precision Equipment Co.**, Dept. NED-9, 3714 N. Milwaukee Ave., Chicago 41, Ill.

▲ For more details circle NED-549 J4 on enclosed inquiry slip ▲

OUTLET BOX

has two T-slot receptacles



Designed to permit use of electric hand tools and test equipment at remote locations, Electro-Safe outlet box is of steel construction and will withstand rough usage. Standard model has two T-slot duplex receptacles with provision for fusing and grounding. An 8-ft three-conductor line cord is standard, but desired cord length can be ordered or unit is available without any cord. Outlets other than T-slot can also be provided. Box measures 5 1/2 x 7 1/2 x 2 1/2-in. It is finished in grey-brown hammertone. Price is $9.50. Made by **Dalco Mfg. Co.**, Dept. N-1, 333 N. Third St., Philadelphia 6, Pa.

▲ For more details circle NED-550 J4 on enclosed inquiry slip ▲

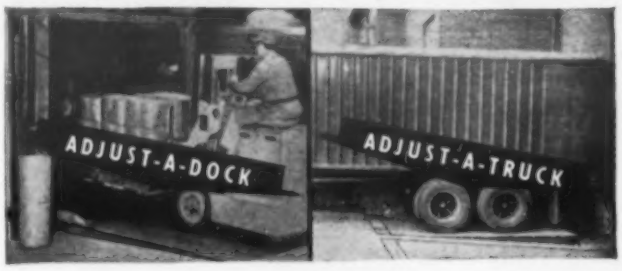
PAPER PALLETS

light, demountable, 1920-lb capacity

Designed for handling and shipping bagged and packaged commodities, Accopak disposable pallets consist of paper sling fitted with paper tubes. Bayonet forks adaptable to any fork-lift truck slip into the tubes, enabling load to be lifted, carried and stacked in single or multiple-deck tiers without removal of pallet. Complete pallet weighs less than 3 lb, is impregnated with a special resin which gives both dry and wet strength, and will carry a 1920-lb load. Pallets are easy to store, with sling either rolled or stacked flat and tubes tied in suitable bundles. Made by **American Cyanamid Co.**, Paper Chemicals Dept., 30 Rockefeller Plaza, New York 20, N. Y.

▲ For more details circle NED-551 J4 on enclosed inquiry slip ▲

ROWE Adjustable Dock And Truck Ramps



. . . help you move more tonnage
. . . cut your dock handling costs
. . . eliminate non-productive dock tie-up of equipment and personnel
. . . reduce breakage and accidents

Whether you are planning new construction or modernizing old shipping facilities, ROWE offers a large selection of low cost dock or truck ramps that will enable you to improve the efficiency of your loading or unloading operations.

Write for a free copy of the ROWE booklet detailing equipment available.

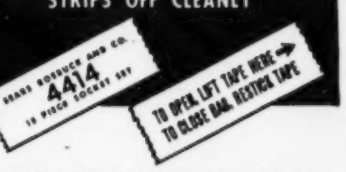
ROWE METHODS, INC.
2534-1 DETROIT AVE. CLEVELAND 13, OHIO

▲ For more details circle NED-552 J4 on enclosed inquiry slip ▲

PRICES SLASHED UP TO 40% ON

New LABELON PRINTED FLATBACK TAPE

TRUE WHITE
PRECISION PRINTED
SELF-STICKING • ADHERES TIGHTLY
STRIPS OFF CLEANLY



LABELON Printed FLATBACK
The new, low-cost tape for

- SEALING
- HOLDING
- BUNDLING
- MASKING
- INSTRUCTING
- IDENTIFYING
- WARNING
- INSPECTING

Choice of Widths, Lengths, Message

LABELON'S new printed, pressure-sensitive Flatback Tape looks better, sticks better, and COSTS UP TO 40% LESS! Cleaner TRUE WHITE surface. Can be written on with pen or pencil. Wide variety of widths and roll lengths, with your message, design, trademark, symbol, etc. printed in choice of colors.

Write today for prices and FREE SAMPLES
Dept. NED-9

LABELON TAPE CO., Inc.
450 Atlantic Ave., Rochester 9, N.Y.

▲ For more details circle NED-553 J4 on enclosed inquiry slip ▲

EMERGENCY MANPOWER

"CANTON" Portable Floor Crane. Lifts — transports — spots loads up to 3 tons. One man operation. Emergency manpower for any corner of the shop. Made in varying heights and lifting capacities. Light weight welded tubular steel construction. Safe—Inexpensive—Adaptable.

The HILL ACME CO.
"CANTON" DIVISION 1201 W. 65TH ST., CLEVELAND 2, OHIO

▲ For more details circle NED-554 J4 on enclosed inquiry slip ▲

LOOK BELOW

SPECIALIZED SERVICE ON

STAINLESS STEEL TUBING

Are you dissatisfied with the quality of your stainless steel tubing? How about deliveries? Does your order "get lost" in big company red tape? Only from Damascus can you actually obtain real specialized service. That's because Damascus makes one product and one product only—stainless steel tubing. You not only get top quality tubing but your order receives preferred attention. For specialized service on your inquiry or order, write, wire or phone.

DAMASCUS TUBE COMPANY
STAINLESS STEEL TUBING AND PIPE
Greenville, Pennsylvania

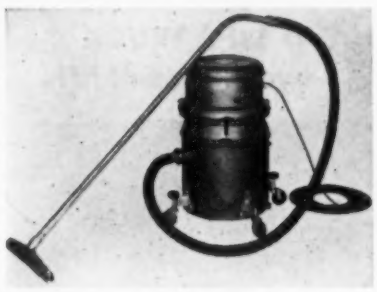
▲ For more details circle NED-555 J4 on enclosed inquiry slip ▲

TYPE HOLDER
accommodates up to 1/8-in. type

Lightweight Hercules Junior type holder is designed to hold interchangeable type for marking steel, cast iron and other materials. Spring tension clip positions type firmly, while permitting easy type changing. Holder is available in two to eight character capacities. It will take type from standard 1/16-in. Gothic up to and including 1/8-in. Tool is compact, lightweight and well-balanced. It is well suited to precision marking in relatively inaccessible positions. Made by **Acromark Co.**, 7-11 Morrell St., Elizabeth 4, N. J.

▲ For more details circle NED-556 J4 on enclosed inquiry slip ▲

VACUUM CLEANER
for wet or dry pickup service

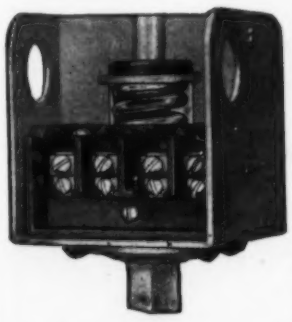


Disposable paper filter bags for dry soil are a feature of Quiet Jumbo vacuum cleaner. Its 1-hp universal motor is separated from the vacuum air stream so that it is also well suited to wet pickup. Cleaner capacity is 1⅓ bushels of dirt or 9 gallons of water. Cleaner weighs 66 lb and is mounted on four 3-in. diameter ball bearing casters. It is 29 in. high and 23 in. diameter. Rated volume is 180 cfm and average closed water lift is 67 in. Forty foot 16-gage three-conductor type SJ cable is provided, and boiler flue cleaning attachments are available. Made by **Kent Co.**, 827 Canal St., Rome, N. Y.

▲ For more details circle NED-557 J4 on enclosed inquiry slip ▲

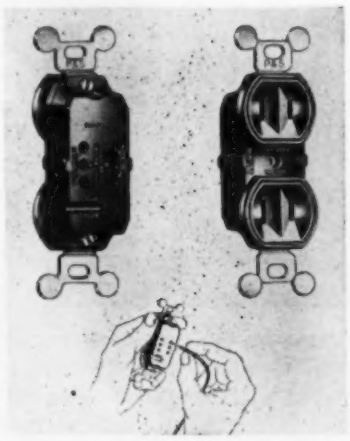
PRESSURE SWITCH
is adjustable heavy-duty unit

Bulletin 10007 heavy-duty pressure switch is usable where reliable long-term operation is essential. Bearing surfaces are stainless steel throughout and diaphragm is Nylon reinforced Neoprene. Silver alloy contacts have positive snap-action. Electrical and mechanical components are separated for ease of maintenance and trouble-free operation. Pressure type terminals are used. Openings on each side of case take ½ or ¾-in. conduit. Operating range and differential are factory set to specifications, but can be adjusted in the field. Steel case and cover are internally braced to prevent damage from abuse. Made by **Cutler-Hammer, Inc.**, 574 N. Twelfth St., Milwaukee 1, Wis.



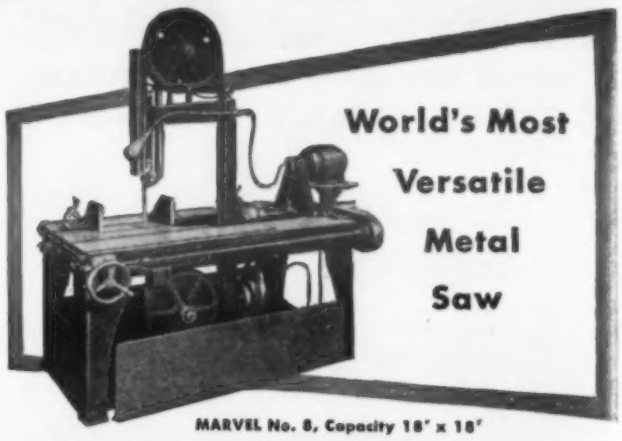
▲ For more details circle NED-558 J4 on enclosed inquiry slip ▲

DUPLEX ELECTRIC OUTLET
has screwless terminals



Model 1500 duplex electric outlet is easily wired by stripping wire to the gage molded in back of the outlet and inserting wires in wire holes. Phosphor bronze spring contacts hold wires with grip exceeding UL requirements. Wires can be removed by inserting pointed instrument in center hole on either side. Back is completely insulated. Brown and ivory outlets are designed for use with No. 12 and 14 solid wire. Made by **Pass & Seymour, Inc.**, 50 Boyd Ave., Syracuse 9, N. Y.

▲ For more details circle NED-559 J4 on enclosed inquiry slip ▲



MARVEL No. 8, Capacity 18" x 18"

There is no other sawing machine like it. The work remains stationary. The blade is guided with a 90° twist and power fed vertically through the work. The saw blade and column can be instantly swung and clamped at any angle to 45° either right or left from vertical for miter cutting.

The number 8 MARVEL saw will handle the smallest, as well as the largest work up to 18" x 18". It will cut-off, trim, miter, notch, and split all bar stock, pipe, structural sections, moulding, tubing, or irregular shapes.

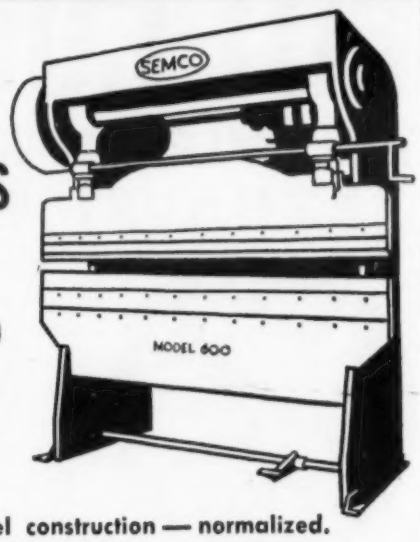
Write for our catalog, containing valuable information, enabling you to select a metal saw best suited to your work.

MARVEL Metal Cutting **SAWS** — Better Machines-Better Blades

ARMSTRONG-BLUM MFG. CO.
"The Hack Saw People"
5700 Bloomingdale Ave. Chicago 39, U.S.A.

▲ For more details circle NED-560 J4 on enclosed inquiry slip ▲

NEW PRESS BRAKES
in four sizes 6', 8', 10' and 12' 30 to 60 ton.



LOW PRICED
BIG PRESS FEATURES

- All steel construction — normalized.
- Ball and Roller Bearings throughout.
- Fine adjustment of ram.
- Heavy pitmans with buttress threads.

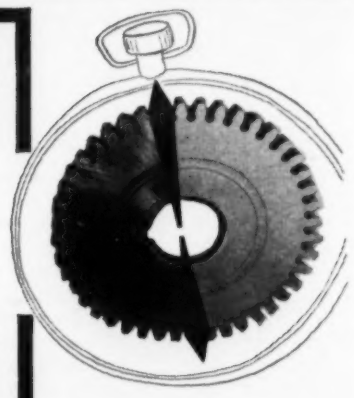
Made by the makers of famous SEMCO "35 YEAR" BRAKE DIES.

Write for NEW color folder and prices of PRESS BRAKES and 26 standard BRAKE DIE designs. Send die specifications for estimate.

SEMCO SERVICE MACHINE CO., INC.
202 Miller St. Elizabeth 4, N. J.

▲ For more details circle NED-561 J4 on enclosed inquiry slip ▲

SAVE HOURS *in finishing time with* **LIQUAMATTE** *wet blasting*



Tools, dies, molds, engine parts, etc. requiring 1 to 6 hours to finish by hand methods are now finished in from 30 seconds to 10 minutes in a Liquamatte Wet Blasting Machine. It produces close tolerance finishes mechanically at high speeds that previously have been impossible to achieve except by hand methods. For example, at the Oling Tool Company, a Liquamatte is saving an average of 50% on former time and labor requirements for surfacing tools prior to plating. On some items, such as drill bits, savings as high as 80% have been effected. Send for Bulletin 43 for the complete story.

American WHEELABRATOR & EQUIPMENT CORP. 508 S. Byrkit St., Mishawaka, Indiana

▲ For more details circle NED-562 J4 on enclosed inquiry slip ▲

SAVE UP TO 85% ON GOVERNMENT SURPLUS

MAGNI-FOCUSER
Has fine ground lenses of optical glass. Neutralizes eye strain from close work. Binocular design gives third dimensional vision. Allows freedom of both hands. Wear over glasses. Plastic frame with adjustable headband.
SIZES: 20" focal lgth. 1½ power – 14" focal lgth., 1¾ power, 10" focal lgth., 2¼ power; 8" focal lgth., 2¾ power . . . . . price each ONLY 10.50

HYDRAULIC EQUIPMENT
We stock over 100,000 Hydraulic Cylinders in 106 different types and sizes. These can be adapted wherever tremendous power is needed to push, pull, hoist, mould or drive, etc.
SPECIAL
Gives 20,000 lb. thrust using 1500 PSI line pressure as obtained from our hydraulic pumps. Will produce up to 40,000 lb. thrust with 3000 PSI. Can also be used on a low pressure air system. Has 4" bore; 18" stroke; 30½" long. Ideal for shop. Part No. 29 USED 29.95 NEW 43.95

OTC TOOLS
See our complete line. Pullers for Gears, Bearings, Wheels, Pulleys, Bushings, Shafts, etc.

NEW 10 TON HYDRAULIC PRESS
Use this Press in the Shop or take it with you on the job. Frame is 4" welded channel iron. Has 4½" stroke, 2½" diam. ram. Valve operates piston in both directions. Adjustable platform. Positive power Hand Pump with handle. 2000 PSI pressure gauge. 129.00
SIZE: 60" high 27" wide 29" base

HYDRAULIC HAND PUMP
Operating pressure 1500 PSI. Cap., 1.5 cu. in per complete cycle . . . 12.75

HYDRAULIC ACCUMULATORS
A-2B FLOATING PISTON TYPE – 4"x 18" Built to stand 2,000 PSI 12.75
A-5 VICKERS – 10" dia. Ball type. Built to stand 2000 P.S.I. 24.50
NOTE: Stocks include bargains in Hydraulic Pumps – Valves – Motors – Boosters – as well as Oil, Water and Fuel Pumps, etc.

WORLD'S MOST AMAZING BARGAIN CATALOG
320 PAGE-1954 EDITION
Packed with SENSATIONAL VALUES in GOV'T SURPLUS – FACTORY CLOSE-OUTS – and GENERAL MERCHANDISE. Fully priced and illustrated. Thousands of items in Machine and Industrial Tools – Hydraulic Equipment such as Cylinders, Pumps, Valves, Motors, Fittings, etc. Bargains in Electric Motors, Generators, Blowers, Parts, etc. Also Hand and Power tools, Precision Instruments, Bearings, Hose Clamps, Winches, Foam Rubber, Microscopes, etc. ALL AT PALLEY BARGAIN PRICES – PRICED TO SELL!

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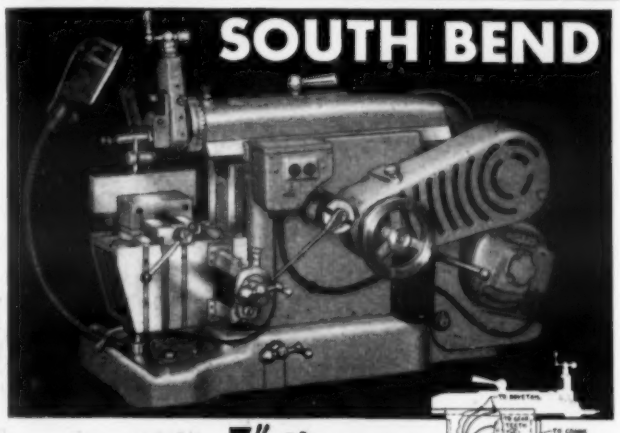
Pay by M.O. or check. P.O.'s accptd. from D&B firms. ½ deposit with C.O.D.'s. Prices FOB Los Angeles.

For more details circle NED-563 J4 on enclosed inquiry slip

SOUTH BEND



ONLY 7" Shaper
with pressure lubrication

COMPARE THESE FEATURES:

- Extreme precision for the most exacting tolerances.
- Convenient controls for ease of operation.
- Ample bearing surfaces for rigidity and durability.
- Smooth, quiet operation at all speeds.
- Quick acting belt tension release.
- Sliding support shoe for outer end of table.
- Length of stroke adjustment 0 to 7".
- Reversible power cross-feeds .002" to .012".
- Swivel vise with graduated base.
- Price f.o.b. factory $551 less motor.

Write for Catalog
SOUTH BEND LATHE
SOUTH BEND 22, INDIANA
Building Better Tools Since 1906

For more details circle NED-564 J4 on enclosed inquiry slip

NEW PANALARM "50"

. . . simple, plug-in signal system . . .

ALL your signal requirements are fulfilled by a single PANALARM "50". This combined audio-visual system is self-contained, prewired, easily installed. New features permit circuit changes without re-wiring. New instrument-type construction gives maximum dependability and service.

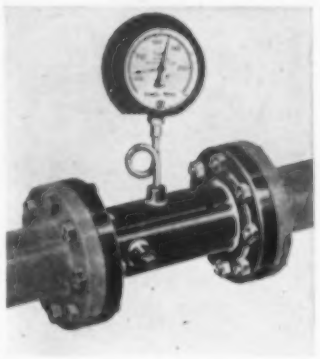
All moving parts and contacts are within hermetically sealed, corrosion-proof, plug-in units. Additional signals are merely plugged in.

PANALARM "50" . . . available with backlighted nameplates or bullseye lamps . . . for 3 to 54 signals.

Write for Informative Catalog 100.
PANALARM PRODUCTS, INC.
7421 N. Hamlin Ave. • Skokie, Illinois

For more details circle NED-565 J4 on enclosed inquiry slip

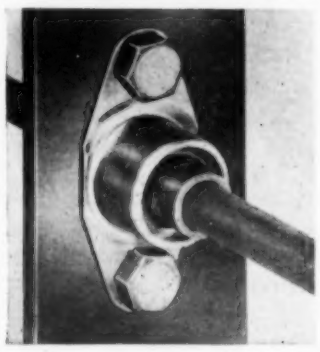
FLOW METER
for controlling steam, other gases



Designed for flow control and measurement, Critiflo-Meter can be used with steam, air and other gases. A corrosion-resistant nozzle is mounted in a housing where it causes back pressure by restricting flow. This pressure, which is proportionate to the flow, is measured by flow indicator or recording pressure gage connected to the housing. Device is available for pipe sizes from 2 through 10 in. Housings for working pressures from 150 through 900 psi accommodate various interchangeable nozzles in sizes for flow rates as high as 300,000 lb per hour steam. Simple, highly accurate device is easily installed in any piping system in any position from horizontal to vertical. Made by **King Engineering Corp.**, P. O. Box 540, Ann Arbor, Mich.

For more details circle NED-566 J4 on enclosed inquiry slip

PRECISION BEARINGS
flange mounted radial type



Suitable for medium loads and speeds up to 5000 rpm, series 6900 flange mounted radial bearings are available in standard shaft sizes ranging from ¼ to 1 in. They consist of a double composition sealed precision radial bearing and flanged housing, or adaptor, designed for flush mounting. Two locking set screws position bearing on the shaft. Bearings, which can accommodate a limited amount of angular misalignment, are also available unground for noncritical applications. Made by **Nice Ball Bearing Co.**, 2926 Hunting Park Ave., Philadelphia 40, Pa.

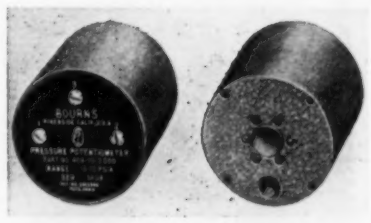
For more details circle NED-567 J4 on enclosed inquiry slip

VIBRATION METER
direct-reading portable instrument

Both displacement and acceleration can be measured by the type VHA direct-reading portable vibration meter. It functions over a frequency range of 10 to 250 cps, acceleration ranges of 0-0.03, 0-0.01, 0-0.3, 0-1, 0-3 and 0-10 g and peak-to-peak displacement ranges of 0-3, 0-10, 0-30, 0-100 and 0-300 mils full scale. Meter consists of a barium titanite accelerometer which feeds through an electronic amplifier and copper-oxide rectifier to an indicating microammeter. Operation is on common hearing aid batteries. Made by **General Electric Co.**, Schenectady 5, N. Y.

For more details circle NED-568 J4 on enclosed inquiry slip

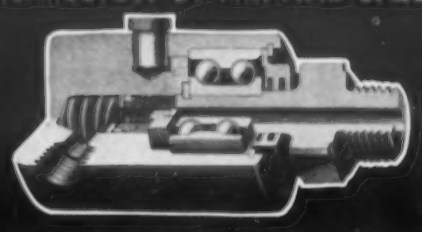
ABSOLUTE PRESSURE POTENTIOMETER
resists shock, temperature extremes



Capable of withstanding 50 G longitudinal acceleration with less than 1 per cent error, model 408 absolute pressure potentiometer measures altitude, fuel pressure, throat and static pressure in a variety of applications. Static reference pressure is provided by an aneroid type bellows. Lightweight and compact instrument is rated at ½-w output, sufficient for direct connection to recorders and control systems. Many standard pressure ranges are available, including 0-2, 0-8, 0-30, 5-10, 13-14.7 psia. Standard resistance values are 1000, 2000, 5000 and 10,000 ohms. Made by **Bourns Laboratories**, Dept. 8, 6135 Magnolia Ave., Riverside, Calif.

For more details circle NED-569 J4 on enclosed inquiry slip

FAWICK ROTORSEAL
PROVIDES TROUBLE-FREE TRANSMISSION OF AIR AND LIQUIDS



If your machine problem requires the transmission of air or liquids from stationary to rotating machine members, a FAWICK ROTORSEAL will provide the trouble-free, practical answer.

Precision-made ROTORSEALS are available in either single or multiple passage units, producing an absolute sealing of air, liquids, or gases under pressure. They are equally effective in vacuum applications. Thousands of installations have proved the high efficiency of FAWICK ROTORSEALS.

FAWICK AIRFLEX DIVISION
FEDERAL FAWICK CORPORATION
9919 CLINTON ROAD
CLEVELAND 11, OHIO

Write for ROTORSEAL Bulletin ML-6.
FAWICK Airflex
INDUSTRIAL CLUTCHES AND BRAKES

For more details circle NED-570 J4 on enclosed inquiry slip

Hardware openings on Ford cars are quickly covered with a sealer, based on BAKELITE Vinyl Resins, and supplied by **Dennis Chemical Co.**, 2701 Papin St., St. Louis 3, Mo.

Sprayed film seals openings up to three inches across

The inside panels on Ford car doors are one of many applications for a new, economical sealing method. Regular industrial spray equipment is used with a sealer coating based on BAKELITE Vinyl Resins. Openings in these panels for control mechanisms (door latches, window wind-ups in cars), bolts, and screws permit entrance of dust and moisture. This can lead to deterioration of the interior surfaces and structure, and possible staining of interior cloth covering. The sprayed-on sealer forms a flexible and vibration-resistant, tightly-adhering film over such openings. Sound-deadening is an added advantage.

This sealing method is one more way by which manufacturers and industry can produce better products. Take advantage of the excellent durability and resistance of BAKELITE Vinyl Resins to acids, alkalies and many other agents.

For a free copy of our booklet, "BAKELITE RESIN COATINGS FOR THE GENERAL INDUSTRY" write Dept. XH-8.

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VINYL RESINS
TRADE MARK
BAKELITE COMPANY
A Division of Union Carbide and Carbon Corporation
UCC
30 E. 42nd Street, New York 17, N.Y.

For more details circle NED-571 J4 on enclosed inquiry slip

AGASTAT trademark

pneumatic time delay relays

- Light, versatile, dependable
- Unaffected by voltage variations
- Instantaneous recycling
- Adjustable timing from 0.1 second to 10 or more minutes
- Available in models which offer:

delays on energizing and de-energizing — two step delays
manually actuated time delay switch — remote push button control

Write our application engineers for help with your timing problem. Address Dept. A13-95.

AGA DIVISION — Elastic Stop Nut Corporation of America
1027 Newark Avenue, Elizabeth, New Jersey
Pioneers in pneumatic timing.

For more details circle NED-572 J4 on enclosed inquiry slip

INSURE *Proven Quality* with JONES PLUGS AND SOCKETS

P-306-CCT Plug, Cable Clamp in Cap.

Jones Series 300 illustrated. Small Plugs & Sockets for 1001 Uses. Cap or panel mounting.

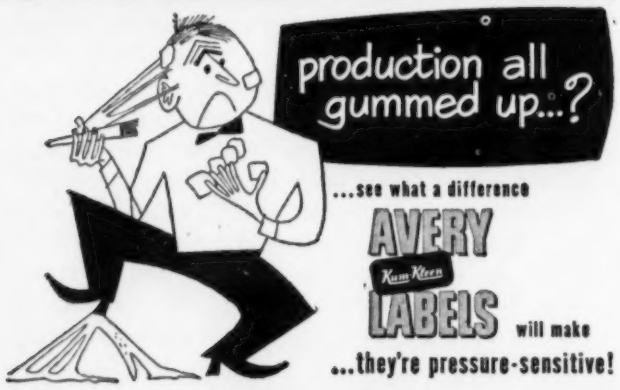
S-306-AB Socket with Angle Brackets.

- Knife-switch socket contacts phosphor bronze, cadmium plated.
- Bar type Plug contacts brass, cadmium plated, with cross section of 5/32" by 3/64".
- Insulation molded bakelite.
- All Plugs and Sockets polarized.
- Metal Caps, with formed fibre linings.
- Made in two to 33 contacts.
- For 45 volts, 5 amperes. Efficient at much higher ratings where circuit characteristics permit.

Ask for Jones Catalog No. 20 showing complete line of Electrical Connecting Devices, Plugs, Sockets, Terminal Strips. Write or wire today.

Jones — HOWARD B. JONES DIVISION
CINCH MANUFACTURING CORPORATION
CHICAGO 24, ILLINOIS
SUBSIDIARY OF UNITED-CARR FASTENER CORP.

For more details circle NED-573 J4 on enclosed inquiry slip



■ Self-adhesive Avery Labels are quick, clean and neat... there's no mess, no fuss, no sticky fingers. Combined with patented Avery dispensers, they'll speed and simplify your labeling—and production! They're laid right on your product—*without moistening.* They'll put your trade mark on that hard-to-label surface...put a warning sticker or wiring diagram on your product or any clean, smooth spot. For inspection stickers...color coding...guarantees—they'll really speed production, packaging or any labeling or marking job!

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☐ Have the Avery Label man call

Name_____
Company_____
Address_____
City_____ State_____

For more details circle NED-574 J4 on enclosed inquiry slip

PORTABLE CABLE CHECKER
requires little training to operate

Model 203 automatic cable checker affords quick identification of conductor connections in terminated and unterminated cables and indicates shorts between wires in a cable. It consists of master and slave units and can be operated by anyone without special training. Indicator lamps on the master unit identify connector under test, and other lamps on slave unit light when a short is found. Checker will scan up to 40 contacts in 8 seconds. Up to 20 connectors can be mounted for testing at once. Mercury pool eliminates stripping unterminated cables. Unit operates on standard 117-v ac power. Made by **Link Aviation, Inc.,** Dept. N-1, Binghamton, N. Y.

For more details circle NED-575 J4 on enclosed inquiry slip

DECADE RESISTANCE BOX
provides more than 1 million steps

Mounted on an adjustable base, compact Dekabox alternating current resistance box provides resistance steps in 1-ohm increments from 0 to 1,199,999 ohms. Resistance values are read off the dial settings in a single straight line. Precision wound resistors are used, specially designed to minimize frequency error. Overall accuracy is ±0.05 per cent plus 0.030-ohms. Laboratory type binding posts and solid silver switch contacts are used. Circuit diagram, resistance and current values are marked on the front panel. Made by **Electro-Measurements, Inc.,** Dept. EE-7, 4312 S. E. Stark St., Portland 15, Oreg.

For more details circle NED-576 J4 on enclosed inquiry slip

MAGNESIUM DOCKBOARDS
for loads up to 20,000 lb

Custom-engineered to meet specific dock and operating conditions, magnesium dockboards are available to handle loads up to 20,000 lb. Safety side curb design prevents steel power truck wheel rims from tearing the curb. Special alloy curb ends give high strength at stress points and wide-radius design facilitates maneuvering in close quarters. Made by **Magline Inc.,** P. O. Box 200, Pinconning, Mich.

For more details circle NED-577 J4 on enclosed inquiry slip

BAG PACKER
shakes bags during filling

Powdered granular, palletized and fibrous materials are packed to a uniform weight in valve type bags with the Auger-matic bag packer. Multiple action model has a scale which includes a shaker to jolt each bag vigorously to prevent slack filling. Clamp holds the valve bag in place on the filling spout, regardless of force with which material flows into the bag. Optional auger unit can be installed in hopper to prevent clogging or bridging. Operation is automatic, and built-in scale shuts off packer when desired weight is reached in bag contents. Made by **E. D. Coddington Mfg. Co.,** 5024-A N. 37th St., Milwaukee 9, Wis.

For more details circle NED-578 J4 on enclosed inquiry slip

The "Handler" is the first proved-in-service gasoline powered Lift Truck with hydraulic drive and hydraulic control. *Just one lever does all the work—shifts, lifts and brakes.* 2 speeds forward, 2 speeds backward. Instantaneous reversing. Rider has complete visibility at all times, and "dead man" brakes are an extra safety factor.

6 H. P. gas engine provides plenty of power for rugged round-the-clock operation.

Write today for descriptive folder.

THE COLSON CORPORATION
Elyria, Ohio

CASTERS • HAND TRUCKS • LIFT JACK SYSTEMS
Hydraulic, Electric and Mechanical Power Lifts and Transports

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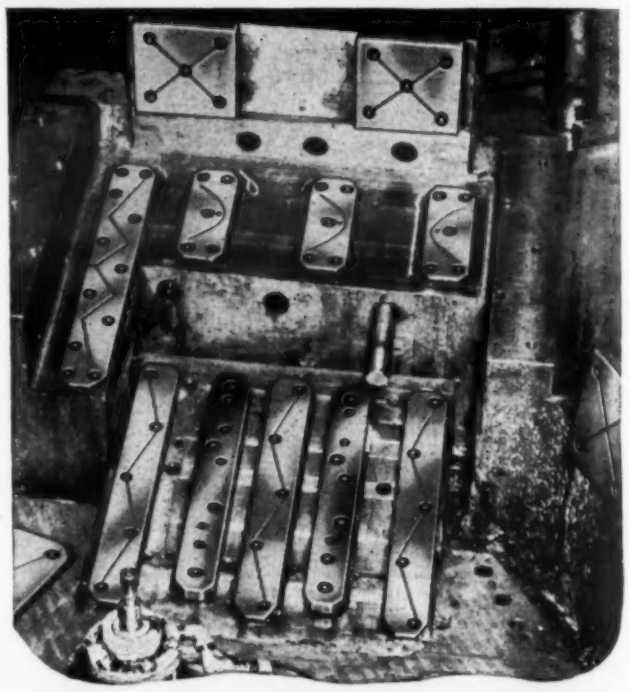

. . . long wearing, economical OK aluminum bronze wear plates

Practically every important automobile manufacturer now uses OK aluminum bronze wear plates on body dies.

By a unique cladding process, long-wearing aluminum bronze is bonded to a machinable steel base. Cost is drastically lower when compared to solid cast bronze plates. A finer quality bearing surface is obtained, resulting in longer life. When fitting is required to suit die, steel backing of plate is easily machinable, and no difficulty is encountered drilling or counter boring through bronze surface. OK aluminum bronze plates are applicable wherever a die has a sliding or cam action. A large selection of sizes of OK aluminum bronze plates is *carried in stock* . . . finished ground, flat and parallel . . . ready to ship. Simply send your drawings or sketches to our engineering department.

For complete information write Dept. 12— H

Manufacturers for the metal working industry of:
SLITTER KNIVES • SHEAR BLADES • BRONZE WAYS
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THE OHIO KNIFE CO.
CINCINNATI 23, OHIO

For more details circle NED-580 J4 on enclosed inquiry slip

parts like these

Indicating pointer — 3D2 aluminum to 24S-T.

are easy to weld with

Self threading needle — full-tempered steel.

RAYTHEON WELDPOWER ®

The delicate job of joining two parts of a tempered steel self-threading sewing needle — or positioning the indicating pointer to its hub — is no trouble at all for a Raytheon Weldpower Unit. Operators can be trained in a matter of hours to turn out strong, clean welds — even on difficult or "impossible" jobs — on a production basis. Find out about this new, economical method of joining ferrous, non-ferrous or dissimilar metals. Send samples or write for details. Address Dept. 6120-NE-9.

Raytheon Condenser Weldpower Control Units are available in three sizes and with appropriate Weldpower Heads.

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Excellence in Electronics
RAYTHEON MANUFACTURING COMPANY
Equipment Sales Division, Waltham 54, Mass.
DISTRICT OFFICES: Boston • New York • Cleveland • Chicago
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▲ For more details circle NED-581 J4 on enclosed inquiry slip ▲

3000 FINISHED WIRE LEADS per hour . . . automatically

- measured
- cut to length
- stripped one or both ends
- counted

with the

ARTOS CS-6 AUTOMATIC

FAST, FULLY AUTOMATIC production of finished wire leads can save you hundreds of dollars in time and labor. In the cutting and stripping of insulated wire, cord, cable, etc., up to No. 10 stranded or No. 12 solid, the ARTOS CS-6 gives you these advantages:

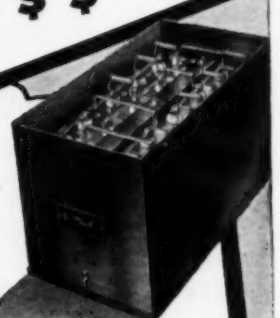
- *Uniform stripping and cutting lengths.*
- *Elimination of human error.*
- *Quick, easy set up.*
- *Reduction of work spoilage, no nicking of wire.*

WRITE FOR FREE BULLETIN. Get the complete story Ask for Bulletin 35-C.

Automatic Wire Cutting and Stripping
ARTOS ENGINEERING CO.
2751 S. 28th St. • Milwaukee 46, Wis.

▲ For more details circle NED-582 J4 on enclosed inquiry slip ▲

CASE HISTORIES PROVE YOU CAN SAVE $ $ $



with SPRAGUE POWER FACTOR CAPACITORS

- CUT POWER BILLS
- AVOID EXTRA EQUIPMENT
- ALLOW BIGGER LOADS
- PROVIDE PLANT FLEXIBILITY

Thousands of installations throughout industry are proving daily that Sprague Power Factor Capacitors installed at each piece of inductive electrical equipment eliminate waste current *right at the source.* Power factor is corrected to the maximum, allowing a greater load at reduced power cost. Need for extra wiring, switchgear, and transformers is often avoided, and plant expansion or moves can be made at minimum cost. *Write for Free 28-page Power Factor Correction Guide.*

® SPRAGUE
Industrial Capacitor Div.
SPRAGUE ELECTRIC CO.
183 MARSHALL STREET
NORTH ADAMS, MASS.

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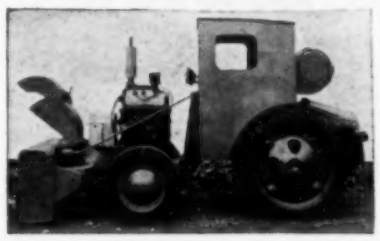
SOLDER POTS for printed circuit operations

Sixteen crucible sizes make up line of thermostatically controlled solder pots for printed circuit operations. All models utilize a heating medium which eliminates local "hot spots." Surface temperatures do not vary beyond ±2° F as measured from any one spot to another in the molten solder. Adjustable thermostatic controls provide control limits of ±10° F. Replaceable heating elements, heavily insulated cast iron crucibles and entire pot assemblies are enclosed in steel casings. Adjustable base legs establish levels on uneven work surfaces. Made by **Vulcan Electric Co.,** Dept. P, 86-90 Holten St., Danvers 7, Mass.

▲ For more details circle NED-584 J4 on enclosed inquiry slip ▲

SNOW THROWER capacity is 2400 sq ft per minute



Fitted with separate engines driving tractor and snow thrower, model 248 snow thrower is designed for compactness and maneuverability. Its capacity is 2400 sq ft of snow per minute at depth up to 32 in. Unit has wheelbase of 58½-in. and turns in a 10-ft radius. Hydraulically-controlled scoop can be raised up to 10¾-in. from the ground and machine will climb curbs up to 8-in. high. Automotive-type steering and independent front suspension are used. Closed operator cab provides protection from elements. Snow thrower can be removed during summer and an agricultural tractor front end attached. Made by **Maxim Silencer Co.,** Dept. TWB, 85 Homestead Ave., Hartford 1, Conn.

▲ For more details circle NED-585 J4 on enclosed inquiry slip ▲

HOLDING COIL SWITCH equals relay plus two switches

Series A1200 holding coil switch performs functions of a relay plus two conventional switches. Built-in solenoid holds switch on contact until solenoid coil circuit is externally interrupted. This circuit as well as external SP-ST switch circuit can be broken manually by switch knob. Snap action device has life in excess of 25,000 make and break cycles at rated load. Applications include circuit overload control, end-sequence shut-off, control of propeller feathering and uses in annunciator systems. Switches have enclosed mechanism for operation in humid or corrosive atmospheres, weigh 3 oz and are 3⅜-in. long. Contacts are rated at 5-amp inductive load at 30-v dc. Switches meet MIL specifications. Made by **Hetherington, Inc.,** Dept. NED, Sharon Hill, Pa.

▲ For more details circle NED-586 J4 on enclosed inquiry slip ▲

BLACK LIGHT LAMP for fluorescent analysis

Typical applications of improved Blak-Ray 3X-4 ultraviolet lamp include flaw detection in metalworking and other manufacturing quality control and examination of agricultural and food products. Precision fixture and reflector are parallel mounted with the lamp base, which serves as an inspection stand or work table. Lamps, which are completely safe to use, burn cool, start and restart without warm-up or cooling off period. Tubes are replaceable and are rated at 7500 hours. Made by **Ultra-Violet Products, Inc.,** 143 Pasadena Ave., South Pasadena, Calif.

▲ For more details circle NED-587 J4 on enclosed inquiry slip ▲

Yes, it can be buried *directly* in the ground. Tough thermoplastic insulation and jacket resist moisture, soil acids, and crushing. *Anaconda Wire & Cable Company, 25 Broadway, New York 4, N. Y.* *Reg. U. S. Pat. Off. 54442

the right cable for the job

ANACONDA® WIRE AND CABLE

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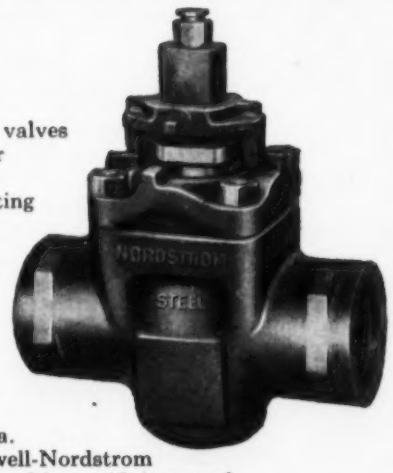
Does Your Plant Have Lines Carrying Corrosive Liquids?

Then You Should Know About

Rockwell-Nordstrom *Valves*



Rockwell-Nordstrom valves resist corrosion better than other valves because the vital seating area of a Rockwell-Nordstrom valve is never exposed to the line fluid. A thin film of lubricant covers the entire seating surface preventing corrosive fluids from acting upon this critical area.

In addition, Rockwell-Nordstrom valves are manufactured in a wide range of special corrosion-resistant metals.

For longer life and trouble-free valve operation, install corrosion-resistant Rockwell-Nordstrom valves at your plant.

There's a new bulletin prepared by Rockwell Manufacturing Company describing corrosion-resistant valves for industrial services. Mail the coupon below for your free copy today! Rockwell Manufacturing Company, Pittsburgh 8, Pa.

Rockwell-Nordstrom Valves

Lubricant-Sealed for Positive Shut-Off

Canadian Licensee: Peacock Brothers Limited.

ROCKWELL MANUFACTURING COMPANY 5432E
Pittsburgh 8, Pa.
Please send me Rockwell-Nordstrom Valve Catalog V-217.
Name_____ Title_____
Company_____
Street_____
City_____ Zone_____ State_____

▲ For more details circle NED-589 J4 on enclosed inquiry slip ▲

Hear Here . . .

Do plant noises drown out your *Telephone Calls?*

Do you have to shout at the top of your lungs, and listen with a finger in your ear . . . when phoning from your plant telephones?

Why compete with that noise? The Acousti-Booth reduces outside noise 50% because walls are of thick, sound absorbing material. Exterior of steel. Order, today. If you aren't satisfied, return it for a *full refund.* You risk only shipping charges.

$100

F.O.B. Chicago, Model 45 . . . if you want light fixture, add $9.

This Acousti-Booth takes less room than a large wall calendar.

Ask for Bulletin A-131

ACOUSTI-BOOTHS

Burgess-Manning Company, Architectural Products Div.
5970 Northwest Highway, Chicago 31, Ill.

For more details circle NED-590 J4 on enclosed inquiry slip

How a 'Sexauer' Easy-Tite faucet washer costing pennies can save you $115.22 a year!

A tiny, 1/32" faucet leak wastes 95,040 gallons—*$24.14* worth*—of water yearly.

Hot water leakage is even costlier . . . Fuel waste adds upward to *$91.08*** more to the loss. Total down the drain: *$115.22.*

And this is the dollar loss caused by only *one* pinpoint leak!

Fuel Waste		Water Waste	Total Waste
Oil (792 gals.)	**$91.08	$24.14	$115.22
Coal (9,879 lbs.)	88.91	24.14	113.05
Gas (84,411 cu. ft.)	84.81	24.14	108.95

*Water costs (figured at $1.90 for 1,000 cu. ft.) authenticated by Hackensack Water Co. **Fuel costs authenticated by American Gas Association.

Save money; cut costs; stop leaks with dependable 'Sexauer' Easy-Tite faucet washers.

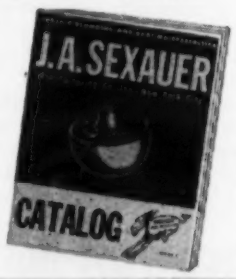
Built like a tire with Fiberglas reinforcement

Easy-Tite faucet washers are made of a special du Pont product, instead of rubber, and reinforced with Fiberglas. The result is a washer that resists the closing squeeze that splits and mushes ordinary washers. And Easy-Tites withstand destructive heat (up to 300° F. by test). These features explain why *'Sexauer' Easy-Tites outwear ordinary faucet washers 6 to 1!*

By avoiding labor on those 5 additional repairs, Easy-Tites cut today's high maintenance costs 83⅓%! But Easy-Tites not only save water, fuel, labor; they also prolong the life of expensive fixtures.

FREE CATALOG—Easy-Tite faucet washers are just part of the line of over 3000 'Sexauer' Triple-Wear plumbing repairs parts and patented precision tools.

Get complete information on Easy-Tites and other cost-cutting 'Sexauer' materials. Send for our FREE, new 118 page Catalog H. Fill in and mail the coupon today.



J. A. Sexauer Mfg. Co., Inc. Dept. AU-94
2503-05 Third Ave., New York 51, N. Y.

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My name.....Title.....
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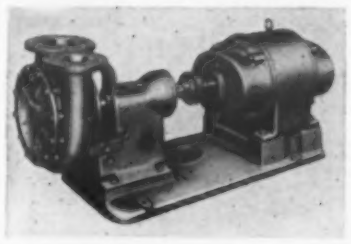
Street.....
City.....Zone.....State.....

SEXAUER

WORLD'S LEADING SPECIALISTS IN PLUMBING AND HEATING REPAIR PARTS

For more details circle NED-591 J4 on enclosed inquiry slip

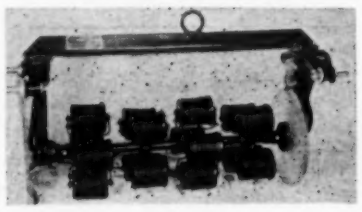
CORROSIVE LIQUID PUMPS
available in several metals, sizes



Entire fluid end of line of Fig. 3715 centrifugal pumps for handling corrosive liquids and slurries up to 350° F can be made of 316, Gould-A-Loy 20, or 304 stainless steels, iron, bronze, bronze fitted, iron with stainless trim or bronze with stainless trim. Pumps are of support-head construction, with support cast integral with bearing housing. Provision for water cooling of support head and quenching of gland are provided. Single or double mechanical seals can be provided. Stuffing box, on the suction side of the semi-open impeller, is under suction pressure only. Pump is built in nine sizes from ¾ to 3 in., with capacities up to 720 gpm and heads to 200 ft. Made by **Goulds Pumps, Inc.,** Dept. NED, Seneca Falls, N. Y.

For more details circle NED-592 J4 on enclosed inquiry slip

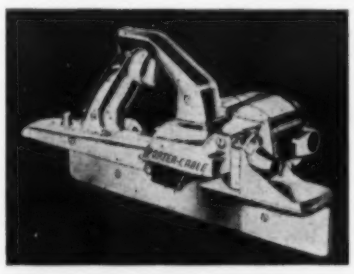
CLUSTER BARREL PLATER
small containers hold various parts



Large quantities of various small parts which cannot be mixed can be efficiently plated with the cluster type barrel plater. A rotary rack holds small containers with proper constant current conducted to each container. Mechanism consists of a shaft rotated by a large ring gear. On the shaft, mounted at intervals of about 8 in., are four spoke arrangements which carry perforated steel, plastisol covered containers. C-shaped spring clips hold container and its lid in place. Plater is adapted to plating of business machine, radio, radar or other small parts. Made by **Udylite Corp.,** Dept. NED, 1651 E. Grand Blvd., Detroit 11, Mich.

For more details circle NED-593 J4 on enclosed inquiry slip

PORTABLE ELECTRIC PLANE
removes 3/32-in. wood each stroke

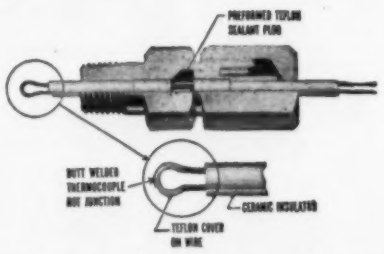


Square, level, glass-smooth surface that needs no sanding is produced by the model 126 Porta-Plane, equipped with a cutter that revolves at 25,000 rpm. Compact 9¼-lb electric unit is 16 in. long and has a bevel adjustment for cutting angles from 45 to −15 degrees. Shavings deflected out of the operator's way will not clog tool. Maximum width of cut is 2 13/32 in. Plane has a trigger switch, cable deflector, wear resistant stainless steel front shoe, adjustable guide fence and depth adjustment lever. Plane is sold separately, or in kit with carrying case and sharpening attachment. Made by **Porter-Cable Machine Co.,** 36 Exchange St., Syracuse 8, N. Y.

For more details circle NED-594 J4 on enclosed inquiry slip

THERMOCOUPLE GLAND
has butt welded thermocouple

Fast responding thermocouple, with an average thermal-time constant of only 4.5 seconds for pressures up to 5000 psi at temperatures from −90 to 500° F, is incorporated in the model TG-14T thermocouple gland. Butt welded thermocouple is covered by a thin-walled Teflon tube for protection against corrosion. Outside of tube is sealed in the gland by mechanical compression of a double-bore Teflon bushing around the tube inside the stainless steel gland. Immersion of the hot junction can be furnished to any desired depth. Wires of 18-gage iron-constantan or copper-constantan calibration are standard. Made by **Conax Corp.,** 4513 Main St., Buffalo 21, N. Y.



For more details circle NED-595 J4 on enclosed inquiry slip

PYREX GAUGE GLASS & CYLINDERS

furnished in any length or finish

● For fast service on Pyrex Tubular Gauge Glass, contact Swift! We can supply Tubular Gauge Glass or Cylinders from stock in any length or finish . . . 2 mm. O.D. to 7" O.D. . . . for chemical, pharmaceutical or industrial applications. Write, wire or phone for immediate delivery.

SWIFT *Glass Division*

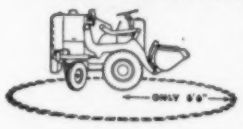
SWIFT LUBRICATOR COMPANY, INC., ELMIRA, N.Y.
330 Tenth St., San Francisco 3 ● 140 Boylston St., Boston 16
807 Mateo St., Los Angeles.

For more details circle NED-596 J4 on enclosed inquiry slip

Lower tilt-back, lower carry

— loads without need for spinning wheels, travels faster

Bucket can tilt back to loosen tough materials or flip in small loads.



5" shorter turning radius (6'6"). Faster speeds to 13.88 mph in reverse, 7.66 forward.

Higher clearance (6'8"), more reach (2'7").

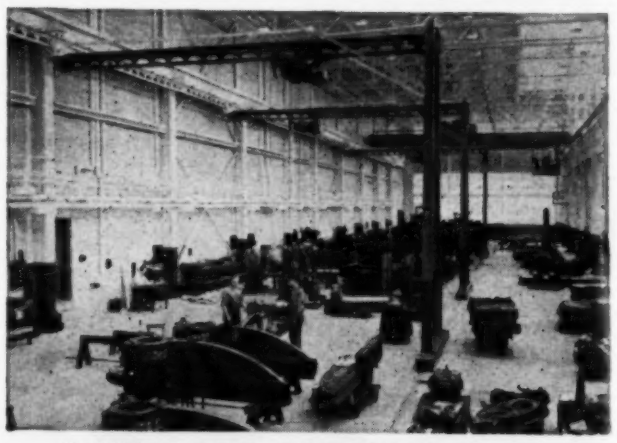
With the Auto-Scoop, operator can tilt the bucket back, independently of hoisting, at ground level. Can quickly loosen and load stubborn materials without undue crowding. Fast, low tilt-back also permits picking up small stockpiles, windrows. Carries low as 4½" from ground, improves stability, speeds travel. Many other advantages. Write for Catalog L12-4.

JAEGER LOAD-PLUS auto-scoop 12 cu. ft.

1 cu. yd. Load-Plus available for bigger work.

The Jaeger Machine Company
615 Dublin Ave., Columbus 16, Ohio

For more details circle NED-597 J4 on enclosed inquiry slip



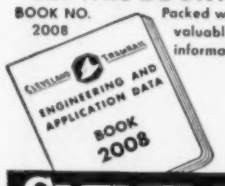
SINGLE LEG GANTRIES . . .

Little Cranes that Speed Production

Skilled workers often wait five or ten minutes and more for crane service. By providing a sufficient number of gantry cranes, much or all of this lost time can be eliminated and production aided. Gantry cranes are inexpensive; several can usually be purchased for less than the price of an additional large overhead crane and far better handling service provided.

GET THIS BOOK!

BOOK NO. 2008 — Packed with valuable information

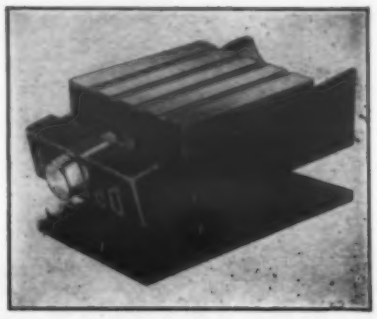


CLEVELAND TRAMRAIL DIVISION
THE CLEVELAND CRANE & ENGINEERING CO.
6613 East 285th St., Wickliffe, Ohio

CLEVELAND TRAMRAIL

For more details circle NED-598 J4 on enclosed inquiry slip

IMPROVED MACHINE LEVELING JACK
is 50% stronger yet lower in height.



Engineering improvements have made this Jack 50% stronger yet lower in height. This was accomplished by redesigning the Empco Jack so that the adjusting screw always remains cradled in the assembly. This insures full bearing of either front or back collar at any stage of operation.

Once the machine is set on Empco Jacks, the simple turning of adjusting screw, with a hand wrench will lower or raise the machine until your level indicator reads "zero". With this feature, periodic machine leveling can be done in a matter of minutes.

To reduce vibration, Vi-Sorb Mounting Pads are available with each style Empco Jack. These pads substantially reduce vibration, the percentage of reduction usually depends upon the thickness of the pad that is used.

Level machine installations with periodical re-leveling is essential to lower costs of machine maintenance. These costs are further reduced by the use of Vi-Sorb Mounting pads under every Empco Leveling Jack.

Available in three styles: JC-1 (standard) and JC-2 (heavy duty) pictured here, and the newest style JS particularly designed for use with anchor bolts. Many models in all styles with minimum height ranging from 1⅞" to 4".

For complete specifications and prices write the **Enterprise Machine Parts Corporation,** 2727 Jerome Ave., Detroit 12, Michigan. *Advt.*

▲ For more details circle **NED-599 J4** on enclosed inquiry slip ▲

hydramotor
—industry's all-purpose heavy-duty motor valve

General Controls G-3 Hydramotor Valve, electro-hydraulically operated, provides positive control of steam, gases, heavy oils and viscous liquids. The operating mechanism contains only 3 moving parts and is lifetime-sealed in oil, eliminating lubrication and maintenance inspection. Its rugged design, two-wire control and current-failure safety, make General Controls' G-3 Hydramotor Valve an all-purpose valve for all kinds of commercial and industrial applications.

GENERAL CONTROLS
Plants in: Glendale, Calif., Burbank, Calif., Skokie, Ill.
Factory Branches in 37 Principal Cities
SEE YOUR CLASSIFIED TELEPHONE DIRECTORY

Manufacturers of Automatic Pressure, Temperature, Level and Flow Controls for Heating, Home Appliances, Refrigeration, Industrial and Aircraft Applications.

▲ For more details circle **NED-600 J4** on enclosed inquiry slip ▲

KELLER AIR MOTORS

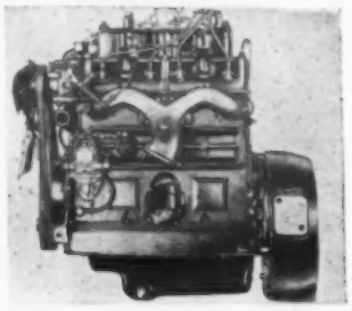
- Compact design with high power-to-weight ratio. Enclosed construction.
- Efficient with either high or low air pressure.
- Positive-acting, piston-type, constant torque motors with infinitely variable speed in either direction.
- ½ To 2¾ hp in a wide range of speeds and torques.

Send for illustrated descriptive Bulletin No. 70

Keller Tool Company
1331 Fulton St.
GRAND HAVEN, MICHIGAN

▲ For more details circle **NED-601 J4** on enclosed inquiry slip ▲

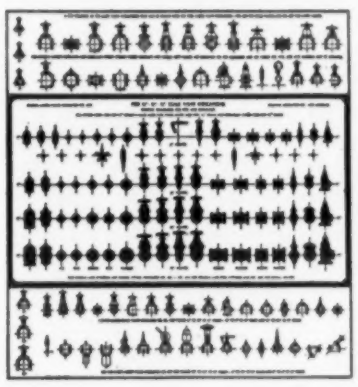
INDUSTRIAL ENGINE
rating is 51 hp at 2400 rpm



Based on military Jeep designs, model 4F industrial engine is now available for the first time for industrial applications. Combination valve-in-head intake valves and valve-in-block exhaust valves permits large valve diameters, good "breathing" and heat control. Piston displacement of engine is 134.2 cu in. It is rated 51 hp at 2400 and 70 hp at 4000 rpm. Engine is available with 6.9 or 7.4 compression ratios. Other features include exhaust valve rotators, hard-chrome compression rings, aluminum alloy pistons and automatic crank case ventilation. Made by **Willys Motors, Inc.,** Industrial Engine Dept., 1240 N. Cove Blvd., Toledo, O.

▲ For more details circle **NED-602 J4** on enclosed inquiry slip ▲

VALVE TEMPLATES
provide for three scales

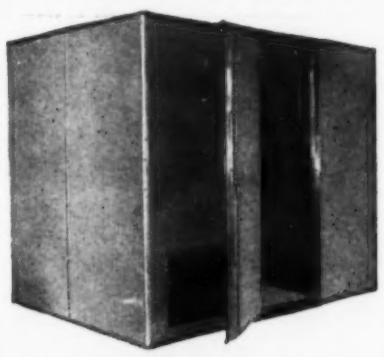


Designed to cut time and costs in scale drawing of standard and special valves, No. 255 and 257 drafting templates are for small and large valves respectively. Scales are ⅛, ¼ and ½-in. Templates measure 5⅜ x 9⅞-in. They are made from rigid Vinylite, a material with a nonglare and nonslip surface. Made by **Graphic Indicator Co.,** Dept. N, 1739 S. La Cienega Blvd., Los Angeles 35, Calif.

▲ For more details circle **NED-603 J4** on enclosed inquiry slip ▲

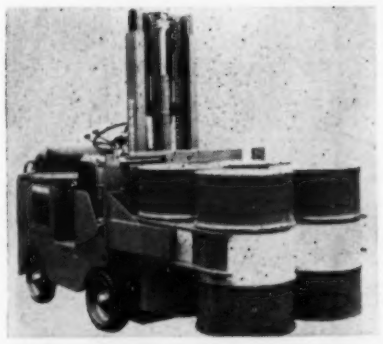
SHIELDED ENCLOSURE
suppresses radio frequency energy

Attenuation of the RFI shielded enclosure with galvanized iron sheet panels is good in both low and high frequency ranges. Measurements made in accordance with military Specification MIL-S-4957 show insertion loss to electric field is at least 110 db from 14 kc to 1000 mc. Enclosure employs the Lindsay structure which consists essentially of 24-gage galvanized-annealed iron sheets joined to rigid ⅛-in. electro-galvanized steel channel frames and bolted at all seams. Panels are interchangeable and the enclosure is portable in assembled or disassembled state. Use may be indoors or outdoors. Made by **Ace Engineering & Machine Co.,** Dept. NED, 3644 N. Lawrence St., Philadelphia 40, Pa.



▲ For more details circle **NED-604 J4** on enclosed inquiry slip ▲

MULTIPLE DRUM CARRIER
handles one, two or four drums



Standard Towmotor fork lift truck can lift and transport one, two or four drums at one time when equipped with this Drum Clamp attachment. Curved pivot-mounted arms, with ribbed rubber gripping surfaces, assure safe hold on either two or four drums. Interchangeable with other Towmotor clamps, the Drum Clamp is controlled hydraulically from the driver's seat. Simplified suspension and easy-to-detach hydraulic couplings allow fast removal of clamp mechanism. Made by **Towmotor Corp.,** 1219 E. 152nd St., Cleveland 10, O.

▲ For more details circle **NED-605 J4** on enclosed inquiry slip ▲

ENGRAVE
NAME PLATES • PANELS • DIALS
in your own shop

10,000 IN USE Accepted by all leading manufacturers as the speediest, most versatile portable engraver. Only the NEW HERMES has these patented features:

- Adjustable for 15 ratios.
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NEW HERMES ENGRAVING MACHINE CORP.
13-19 University Place • New York 3, N. Y.

5 good reasons why CLARKE is your best buy

Look at Clarke's features and then try a Clarke yourself! See how easily a Clarke floor maintainer scrubs, waxes, polishes, steel wools, disc sands, grinds, and safely shampoos rugs and carpets.

Physical effort and costs are cut to a minimum. And — best of all — your floors are CLEAN, easy to keep safe and bright.

There's a Clarke floor maintainer sized for your job and budget, and a choice of six heavy duty wet-dry vacuums to complete an unsurpassed cleaning team.

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Your Copy FREE! Write today for colorful, 22-page "Your Floors and How to Care for Them."

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Clarke Floor Maintainers:
Strongridge Ltd.
124 Weston St., London, Ont.

▲ For more details circle **NED-606 J4** on enclosed inquiry slip ▲

22.6% more air
PER POWER DOLLAR

By actual test, DeVilbiss air compressors deliver as much as 22.6% more air per power dollar. Efficiency like this combined with great care in manufacture and assembly are reasons why a DeVilbiss compressor pays for itself out of power savings alone. Full range of pressure. Types available from ½ through 15 h.p. Write today for full details.

DEVILBISS — THE DEVILBISS COMPANY
Toledo, Ohio
Barrie, Ontario • London, England • Santa Clara, Calif.

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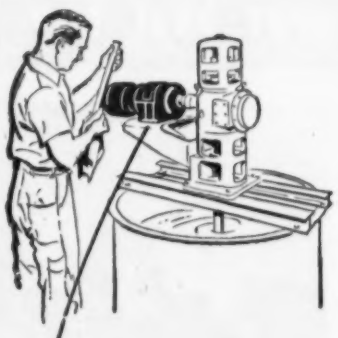
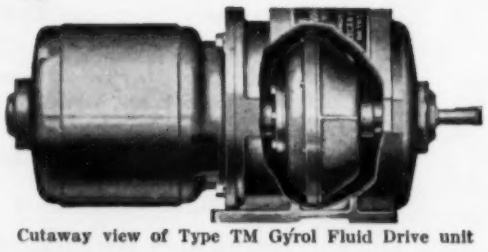
Get smooth power on mixers and agitators with



GÝROL FLUID DRIVE

Smooth and even power can be applied to mixers and agitators when equipped with Gýrol Fluid Drive—thus the risk of mechanical breakdowns and failure of reduction gearing is minimized. Fluid Drive readily permits no-load starting and protects the motor from overload if the mix becomes too heavy. Even when high starting torque is necessary, Fluid Drive and a general purpose motor can fulfill starting requirements. Simple cross-the-line starters can be used. Maintenance saving alone will justify a Gýrol Fluid Drive.

Advantages of American Blower Type TM Gýrol Fluid Drives



Cutaway view of Type TM Gýrol Fluid Drive unit

- Provides smooth flow of power. Shocks are absorbed in a cushion of oil. There's no metal-to-metal contact between driving and driven machinery.
- Offers by its inherent shearpin action, selective overload protection for both motor and driven machinery. Decreases machine "down" time.
- Available as a complete packaged unit suitable for either direct or belt connection to the driven machine. Minimizes alignment problems.

Free trial units are available to original equipment manufacturers

AMERICAN BLOWER
American Blower Corporation, Detroit 32, Michigan
Division of American Radiator & Standard Sanitary Corporation

Serving home and industry:
AMERICAN-STANDARD • AMERICAN BLOWER • CHURCH SEATS & WALL TILE • DETROIT CONTROLS • KEWANEE BOILERS • ROSS EXCHANGERS • SUNBEAM AIR CONDITIONERS

▲ For more details circle NED-608 J4 on enclosed inquiry slip ▲

AUTOMATIC TRANSMISSION
combines clutch and differential

Designed for use on two-wheel propelled units such as small tractors and midget cars, Duo-Drive unit combines functions of clutch, transmission and differential. Belt-drive unit mounts direct on engine crankshaft and consists of two variable-diameter pulleys driving by belt to two countershafts, one for each wheel. Traction wheels are allowed to revolve at different speeds on corners, with full drive to each. Device is controlled by centrifugal governors and is fully automatic. Below factory-set engagement speed, belts are completely released. Drive is a single rotating unit and can be quickly installed on a 1½-in. or longer horizontal shaft. It is available for A or B belts for ⅝ or ¾-in. shafts and up to 4-hp gasoline engines. Made by **Light Inspection Car Works,** V-Plex Clutch Div., Dept. NED, Hagerstown, Ind.

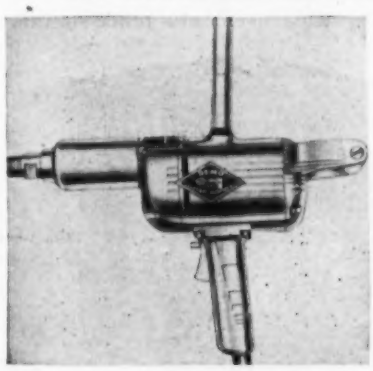
▲ For more details circle NED-609 J4 on enclosed inquiry slip ▲

BURGLARPROOF PADLOCK
has hardened steel shackle, body

Cut-away illustration shows how two hardened steel balls held securely in position by a solid grooved rotating bar are used to lock this American ball locking padlock. Bar will not release until double bitted key is inserted in lock. Tamperproof locks have hardened steel shackles and bodies and meet insurance company and other safety requirements. Locks are available in wide range of sizes and with brass and die cast bodies. Made by **Junkunc Brothers,** Dept. PP, 1145 W. Garfield Blvd., Chicago 21, Ill.

▲ For more details circle NED-610 J4 on enclosed inquiry slip ▲

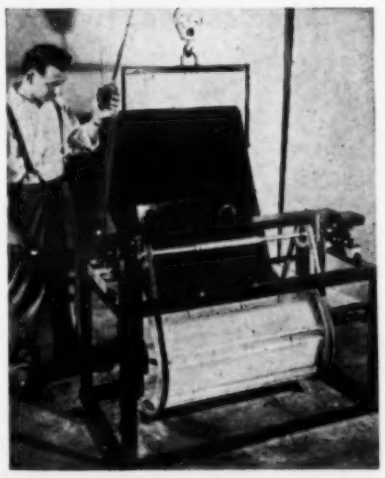
ELECTRIC HAMMER
for concrete and rock drilling



Six thousand blows per minute are delivered by the Demo electric hammer, which at the same time rotates the bit at 1000 rpm. Unit is designed for heavy-duty work in roughing-in through concrete, hard rock and wood. It weighs 9½ lb. Tests show that it will drill 1½-in. diameter holes in concrete to a 2-in. depth in less than 1 minute. Tool requires a maximum of 25 lb pressure for efficient drilling. Sintered carbide core bits, adapters and extensions are available. Distributed by **Davrus Corp.,** Dept. 163, Box 1221, Joliet, Ill.

▲ For more details circle NED-611 J4 on enclosed inquiry slip ▲

PLATING BARREL LOADER
is available in wide range of sizes



Primarily designed for Gill - Singleton plating barrels, semiautomatic load-chute and cylinder support stand are also made in a wide variety of sizes to fit other cylinders and superstructures. Receiving end of chute is flush with the floor for easy loading. It can be used with any type of hoist, and tilts as it is lifted to discharge the full load into the cylinder. Lip is Plastisol-coated to prevent injury to cylinders. Made by **G. S. Equipment Co.,** 5319 St. Clair Ave., Cleveland 3, O.

▲ For more details circle NED-612 J4 on enclosed inquiry slip ▲

JOHNSON BAND SAWS

SPECIFICATIONS — MODEL J
BOTH WET AND DRY MODELS

Capacity—10" rounds, 18" flats.
Motor—½ H.P. Ball Bearing any voltage available, single or polyphase. (¾ H.P. on wet machine).
Wheel Diameters—16".
Floor Space—66" x 31".
Bed—11" wide, 44" long, 6" deep, 24" high.
Overall Height—(Closed)—39".
Blade Length—11'5" x ¾" x .032". All Standard blades of these specifications can be used.
Weight—Approximately 750 lbs. Crated 800 lbs. Boxed for export 875 lbs.
Speeds—35, 90, 130, 190 feet per minute.
Casters—Optional at slight extra cost.

MODEL B, 5" x 10" CAPACITY, ALSO AVAILABLE
WRITE FOR DETAILS

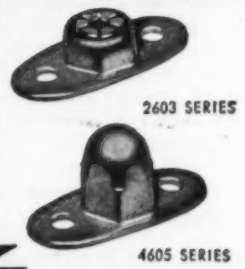
JOHNSON MANUFACTURING CORP.
ALBION, MICHIGAN

▲ For more details circle NED-613 J4 on enclosed inquiry slip ▲

MINIATURE Anchor Nuts

These new, light weight, self-locking anchor nuts have small envelope dimensions, are alike in design but No. 4605 is made with a dome to prevent wire chafing on screw threads in electrical assemblies.

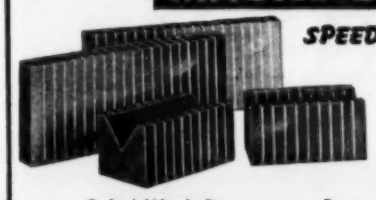
Made in 4-40 and 6-32 thread sizes. Both types meet applicable requirements of Specifications AN-N-5 and AN-N-10.



Nutt-Shel
811 Airway, Dept. NED
Glendale 1, California
Citrus 4-4191—CH 5-3693

▲ For more details circle NED-614 J4 on enclosed inquiry slip ▲

MAGNE-BLOX



SPEED SURFACE GRINDING SET-UPS WITH
MAGNE-BLOX
Laminated Parallels
V-Blocks & Angle Irons

- Grind Work Square
- Grind Work Parallel
- Hold Round Pieces
- Save your Magnetic Chucks
- Eliminate Clamps
- Eliminate Holding Devices

UNIVERSAL SET Code GANBO In Case $22.25

Write for Folder—Code GINXA

RADIUS DRESSER

Better Support by using Swinging Arm pivoted on Lapped Centers, eliminating Vibration and giving Better Finish.

SPEED UP PRODUCTION with the "Little Wonder" RADIUS DRESSER

Dressing and Shaping Grinding Wheels up to 1" Convex or Concave Without Diamond - Code GANLE $39.50

Natural Pointed 1/3 K. Diamond $6.50

Write for Illustrated Folder—Code GINYV

GEORGE SCHERR CO., Inc.
COMPLETE LINE OF PRECISION INSTRUMENTS
200 ND LAFAYETTE ST. • N.Y. 12, N.Y.

▲ For more details circle NED-615 J4 on enclosed inquiry slip ▲

sharpen up a pencil ...and figure your savings

Costs for batch mixing and inter-plant handling are reduced in plant after plant when hard-to-clean containers are replaced by Hackney *Stainless Steel* Containers. That's because the Hackney advantages—swift and easy cleaning, seamless bottom head, protection against product contamination, long useful life—often result in a *lower cost per use*—when compared with present costs for other types of containers.

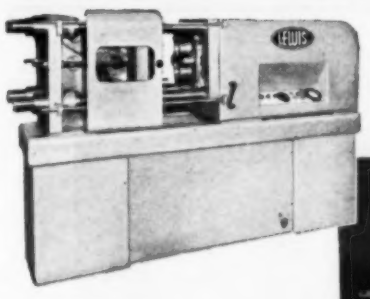
Available in standard sizes of 20, 30, 50 and 55 gallons. Or write for information on other sizes.

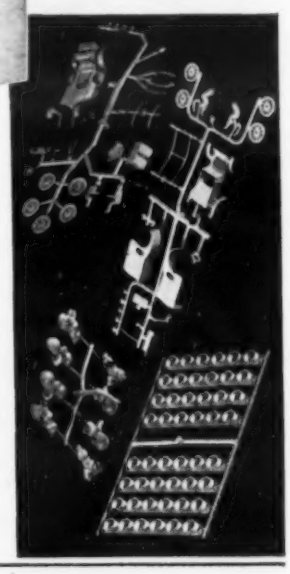
Hackney

Pressed Steel Tank Company
Manufacturer of Hackney Products
1450 South 66th Street, Milwaukee 14, Wisconsin
Downingtown Iron Works, Inc., Division
155 Wallace Ave., Downingtown, Pennsylvania

CONTAINERS FOR GASES, LIQUIDS AND SOLIDS

▲ For more details circle **NED-616 J4** on enclosed inquiry slip ▲





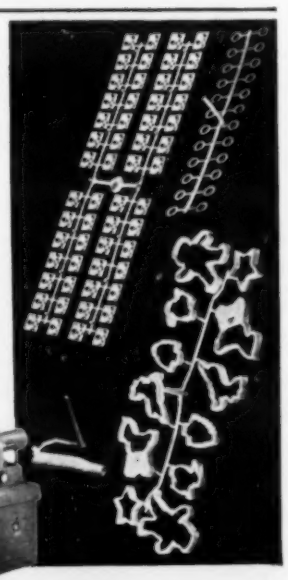
MODEL "4" — Now fully automatic, the LEWIS "4" molding machine gives you more than ever. New features include low-pressure closing control . . . infinitely variable adjustment prior to final close. Any resistance stops machine automatically and sets off warning light and bell. For high-speed mass-production of 2 to 3-oz. parts, the LEWIS "4" is your best buy!

HERE'S WHAT YOU GET WHEN YOU BUY...

LEWIS

PLASTICS MOLDING MACHINES

MODEL "6" — Featuring the "HYDRA-LOCK" clamping mechanism, the LEWIS "6" does the work of larger machines at a fraction of their cost. Fast injection system . . . 200-ton clamp . . . automatic molding cycle . . . compensating feed . . . injection pressures up to 15,000 psi and other exclusive features provide high volume production of large projected area parts. For profitable molding, specify the LEWIS "6"!



Write for These Bulletins for Complete Details

3002-LW

THE LEWIS WELDING AND ENGINEERING CORPORATION
14 INTERSTATE STREET • BEDFORD, OHIO

▲ For more details circle **NED-617 J4** on enclosed inquiry slip ▲

PAPER REPRODUCTION PLATES for offset duplicating machines

Using any Ozalid machine or lithographic exposure device, it is possible to make a positive working paper plate for any popular offset duplicating machine in less than 90 seconds processing time. This is made possible through development of Ozalith sensitized paper plate which is swabbed with two solutions for developing and fixing after exposure. Because of its high contrast, plate can be made from variety of translucent and semi-opaque originals with an extremely wide exposure latitude. On the press, the plate inks up rapidly and shows good resistance to scumming. Made by **General Aniline & Film Corp.**, Ozalid Div., 16 Ansco Rd., Johnson City, N. Y.

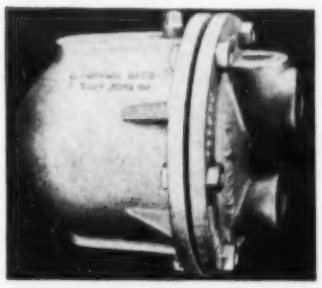
▲ For more details circle **NED-618 J4** on enclosed inquiry slip ▲

MILLING CUTTER with inserted solid carbide blades

Close blade spacing combined with high blade strength permits use of high feed rates with this inserted solid carbide blade milling cutter. Rectangular carbide blades are held in a tapered body slot by a round taper slotted wedge. Blade strength is derived by cutting on the narrow side of the rectangular carbide blade. The 2-in. cutter shown has eight teeth. Maximum number of blades varies from two to five times the diameter, depending upon blade size and cutter size. Shell mills are available with 5/32 x ¼ x 1 in. and ¼ x ⅜ x 1½ in. blade sizes and 2 to 8-in. diameters. Face mills of same design will be available soon. Made by **Millit, Inc.**, 51 Flint St., Rochester 8, N. Y.

▲ For more details circle **NED-619 J4** on enclosed inquiry slip ▲

MOISTURE TRAP for air, gas and steam lines



Moisture and condensate can be drained continuously from piping systems, Hi-eF purifiers and other equipment with the No. 81 float type moisture trap. Intended for air, gas and steam applications, it is suitable for operating pressures up to 200 psi. An optional inlet eases installation. Trap consists of stainless steel valve and seat, lever and copper hide float inside a cast semisteel case. Stainless steel float can be specified. Trap has either ½ or ¾-in. connection. Made by **V. D. Anderson Co.**, Dept. LC, 1935 W. 96th St., Cleveland 2, O.

▲ For more details circle **NED-620 J4** on enclosed inquiry slip ▲

HYDRAULIC STACKER 1500-lb model is battery-powered

Battery power with built-in automatic charger is featured by Easo-Lift hydraulic stacker. This 1500-lb lift unit will raise loads up to 54 in., and other models are available for 68, 80, 96, 108 and 120-in. lifts. Forged steel casters and roller bearing wheels of steel, rubber or other compositions are fitted. Standard width is 31½-in. and standard length 50 in. Foot - controlled spring-loaded floor lock is safety feature. Telescopic models are available, and outrigger spacing, battery and charger output, width and height of truck and fork type can be arranged to meet requirements. Made by **Liftequip Co.**, Dept. C, 1979 E. 59th St., Cleveland 3, O.

▲ For more details circle **NED-621 J4** on enclosed inquiry slip ▲

OPW visi-flo

One Look to Know!

OPW VISI-FLO sight glass indicators are a trustworthy visible means of alerting you as to rate of flow, viscosity, color of liquids, clarity, and purity of product.

OPW VISI-FLO protects you against line stoppage, helps maintain uniformity, a high standard of product quality and an even continuity of production.

Write Write for free Bulletin F-6 describing complete VISI-FLO line, from plain types to magnetic indicating types.

OPW CORPORATION CINCINNATI 25, OHIO

OPW CORPORATION 2729 Colerain Ave. Cincinnati 25, Ohio

▲ For more details circle **NED-622 J4** on enclosed inquiry slip ▲

Versatility with a GREEN ENGRAVER

ENGRAVES
PANELS
DIALS
PLATES

Mark your own symbols, numbers, lettering, on your small parts, tools, identification and name plates . . easily, simply, quickly . . tracing from a master with the GREEN ENGRAVER.
Widely used in electronic and plastic fields, in machine tool shops and wherever permanent marking is needed.
The GREEN ENGRAVER engraves equally well on metals, plastic, wood, hard rubber and glass.
Routs Models Profiles Engraves
Etching attachment and other special equipment for industrial uses are available.
Fact-filled folder on request showing how economies in costs, labor and time are achieved with the GREEN ENGRAVER.

GREEN INSTRUMENT COMPANY
375 PUTNAM AVE., CAMBRIDGE, MASS.

▲ For more details circle **NED-623 J4** on enclosed inquiry slip ▲

CAN YOU REMOVE THIS BROKEN TAP FOR 18c?

A ½" x 13 broken high speed tap embedded in ¾" Brown & Sharp die stock.

Remains of broken tap after being removed by the Elox M-300 Electron Drill*.

Electrode (tool) used	.290" copper tubing
Set-up Time	60 Seconds
Cutting Time	180 Seconds
Clean-up Time	60 Seconds
	300 Seconds or 5 Minutes
Electrode Cost:	$0.02
Labor Cost:	.15 (@ $1.80 per hour)
Electricity approx.	.01
TOTAL COST:	$0.18

LET US SHOW YOU HOW

elox corporation of michigan *T.M. Reg.

738 N. Rochester Road • Clawson, Michigan

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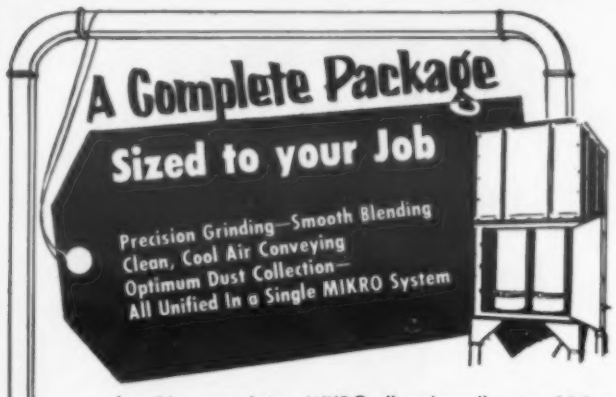
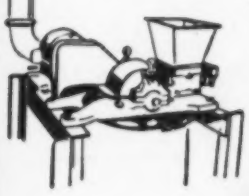


In this complete MIKRO "package"—combining MIKRO-PULVERIZER (or MIKRO-ATOMIZER), MIKRO-AIRACON and MIKRO-COLLECTOR—three separate functions—pulverizing, air conveying and dust collection, are welded into a coordinated and completely automatic processing system which eliminates the cost of manual handling.



The service and facilities of the MIKRO Laboratory are at your disposal, without obligation, to help obtain the best answer for you.

Write for illustrated descriptive literature.

MIKRO
PULVERIZING MACHINERY DIVISION
METALS DISINTEGRATING COMPANY, INC.
28 Chatham Road Summit, New Jersey

PULVERIZING • AIR CONVEYING • DUST COLLECTION EQUIPMENT

For more details circle NED-625 J4 on enclosed inquiry slip

Feature-packed!

New SQUARE D SIZE 4 STARTER

Write for BULLETIN 8536...

Square D Company, 4041 North Richards Street, Milwaukee 12, Wisconsin

ASK YOUR ELECTRICAL DISTRIBUTOR FOR SQUARE D PRODUCTS

SQUARE D COMPANY

For more details circle NED-626 J4 on enclosed inquiry slip

THIS... non-slip flooring
PLUS THIS low budget price
ADDS UP TO THIS A.W. SUPER-DIAMOND

Pattern ½ actual size

When you want real foot safety at an economical price, install *A. W. Super-Diamond.* No other flooring offers such safety, easy maintenance and durability at so low a cost.

Super-Diamond's exclusive engineered raised-diamond pattern puts 40 anti-skid traction points in every footstep.

Super-Diamond takes hard blows and heavy loads—resists fire, heat and most chemicals. And it cuts maintenance costs because it's so easy to clean with hose, mop or broom—has no cracks or corners to collect dirt. Send coupon today for a free copy of our newest booklet on foot safety *and* economy with *Super-Diamond.*

A.W. SUPER-DIAMOND
ROLLED STEEL FLOOR PLATE

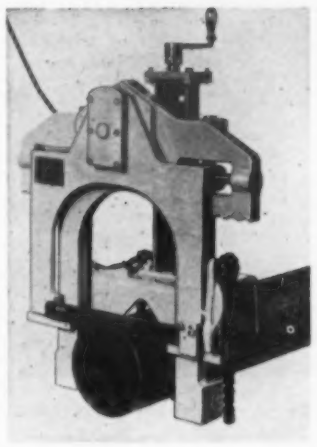
ALAN WOOD STEEL COMPANY
CONSHOHOCKEN, PA.

Please send your new, free booklet SD-4 on Super-Diamond for safety.

Name_____
Company_____
Address_____
City_____ Zone____ State____

For more details circle NED-627 J4 on enclosed inquiry slip

PORTABLE HACK SAW
cuts up to 8-in. diameter pipe



Portable guillotine-type saw is available with electric or air motor and will cut 2, 4, 6, and 8-in. cast iron and steel pipe with up to ½-in. wall thickness, as well as bar stock and beams. Chain pipe vise clamps saw to the work at any angle, and machined V-saddle base assures right-angle cut. Saw weighs about 120 lb and can be operated in a space 25-in. wide. Rate of feed is manually regulated. High speed steel blade is 12-in. long and has a 2-in. stroke. It lifts automatically from cut on the return stroke to extend life. Made by **E. H. Wachs Co.,** 1527 N. Dayton St., Chicago 22, Ill.

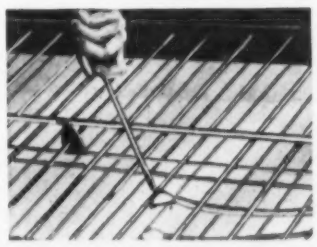
For more details circle NED-628 J4 on enclosed inquiry slip

FOOT SWITCH
designed for easy wiring

Streamlined Clipper foot switch for heavy duty operation has a black wrinkle finish cast iron housing with sponge rubber skid pad to prevent sliding. It is angled for convenient operation from either sitting or standing positions. Dustproof unit can be easily wired. Inner mechanism is exposed by removal of two screws. Weight is 2 lb. Made by **Linemaster Switch Corp.,** 424 Woodstock Terrace, Woodstock, Conn.

For more details circle NED-629 J4 on enclosed inquiry slip

HEATING UNIT
for conveyorized set-ups

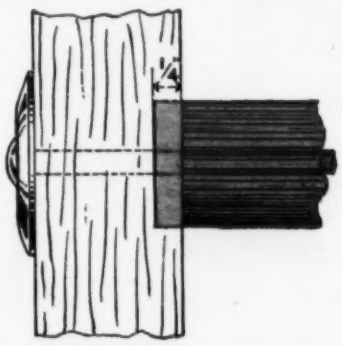


Heating unit is designed for application of heat to parts such as paper, tape, plastics, bondings and resin - impregnated objects on a moving conveyor. It consists of General Electric Calrod heaters controlled by a system which varies power applied to heaters in accordance with predetermined need. This arrangement gives stepless nonvarying heat control up to 1500° F maximum. Heaters are housed in reflector units and can be retracted automatically from the conveyor when it is not in motion. They are available for horizontal or vertical mounting, built to any size requirements. Made by **McCreary Machine Works, Inc.,** Dept. A, Cohoes, N. Y.

For more details circle NED-630 J4 on enclosed inquiry slip

EXTENSION LADDERS
made of aluminum and wood

Fully rodded aluminum dowels mounted in ¼-in. recesses in Douglas fir rails are a feature of this line of extension ladders, made in 16 to 44-ft lengths. Ladders offer protection against electric shock and freezing of hands to dowels in cold weather. Dowels have a ribbed surface to prevent slipping and will not warp, crack or break. Ladders are available with or without rope or pulley. Standard ladder is 15½ in. wide at top and 19 in. wide at bottom. Single ladders with same widths are offered in 8 to 22-ft lengths. Three supported hickory dowels can be provided at top when desired. Made by **Rich Ladder & Mfg. Co.,** Carrollton, Ky.



For more details circle NED-631 J4 on enclosed inquiry slip

OUTSTANDING VALUES BY AMERICA'S LARGEST BUILDERS OF DIVIDING HEADS

You can't beat them for accuracy, ruggedness, quality.

L-W Model SD 6½" Swing DIVIDING HEAD

Spindle Threaded 1½"-8 to fit L-W 5" Universal Chuck

• ACCURATE • RUGGED • 36 LB. • QUALITY CONSTRUCTION Only $132.00

Heavy duty headstock and tailstock designed for maximum rigidity. Alloy steel threaded headstock spindle with extra large tapered bearing and takeup adjustment collar. Head tilts to 90° in vertical position. Alloy stress-proof steel worm and accurately cut worm wheel cut to close limits for accuracy. Ball bearing thrust and adjustable for end play. Complete with three index plates for dividing all numbers to 50 and even numbers to 100, except 96T. Index chart shows all divisions obtainable to 380. Right or left hand models.

Model BP 11" Swing for plain milling machines. Shipping weight, 140 lbs. $225.00

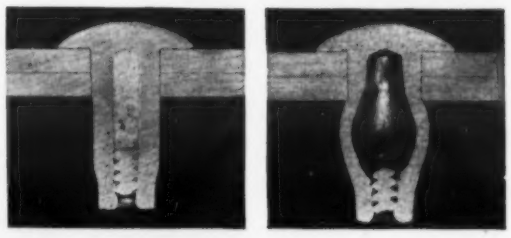
Model AU 11" Swing. Fully Universal for complete indexing and spiral cutting. Shipping weight, 190 lbs. $327.50

Order from your industrial supply distributor or order direct, giving name of your distributor. Immediate Delivery

Send for complete catalog giving prices and specifications on these quality, low-cost L-W Products

L-W CHUCK COMPANY 51 SO. ST. CLAIR ST. TOLEDO 4, OHIO

For more details circle NED-632 J4 on enclosed inquiry slip



Du Pont Blast-Free Industrial Explosive Rivet before expansion. (Cross section shows minute charge contained in Rivet shank.)

Expanded Rivet locks parts in place. Practically noiseless when being set. And no possibility of damage to adjacent structures.

NEW DU PONT BLAST-FREE RIVETS ELIMINATE DAMAGE TO ADJACENT STRUCTURES

On some jobs, rivets are "up against it" in more ways than one! Take work on insulated or honeycomb panels. Tough: often "blind". . . *always* tricky. More important, adjacent structures lie very close to fastener's shop end. Can easily mean deformation . . . weakened assembly.

Why risk trouble . . . when you can easily solve tough problems with *new* Du Pont Blast-Free Industrial Explosive Rivets? Here's how: Downward force of blast is sealed in. When heated iron is applied, Rivet sets quickly . . . almost silently . . . shank fills drilled hole . . . parts are securely joined. Closed shop end can't deform even the closest adjacent structures. Ideal for fastening plastic circuits in electronic equipment . . . and for any delicate assemblies.

What's more, Du Pont Blast-Free Rivets take the fight out of "blind" and awkward fastening. Quick- and easy-setting. Up to 25 a minute, with no after-finishing required. One-man job, too. Work *only* from head side of Rivet. No need for bucking bar, other "extras."

So to handle close or delicate work . . . and save time in doing it . . . start using Du Pont Blast-Free Industrial Explosive Rivets. For full details write for free 32-page booklet. Available from your nearest jobber or E. I. du Pont de Nemours & Co. (Inc.), Explosives Department, Wilmington 98, Delaware.

DU PONT *Hi-Speed* INDUSTRIAL EXPLOSIVE RIVETS

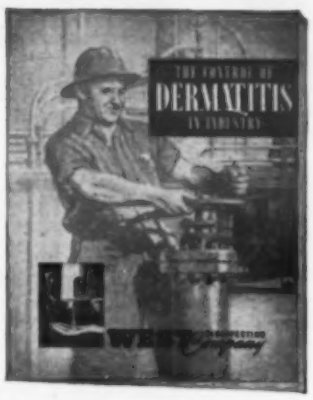
A Product of Du Pont Explosives Research

DU PONT Better Things for Better Living . . . through Chemistry

For more details circle NED-633 J4 on enclosed inquiry slip

DERMATITIS CONTROL MANUAL

outlines industrial skin care methods



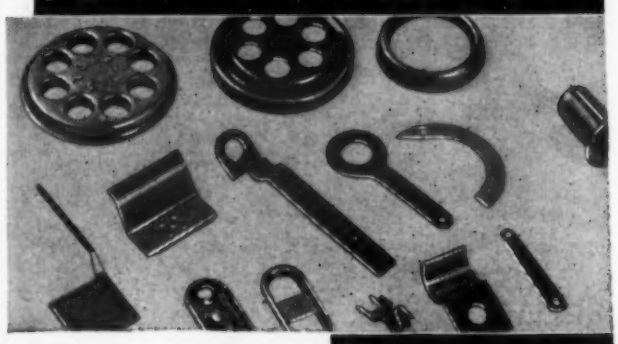
This free 28-page booklet is a complete, up-to-the-minute handbook on industrial dermatitis control. It treats the subject in considerable detail, yet is written in nontechnical style for easy reading by laymen as well as doctors and nurses. Anyone interested in reducing the costs of medical care, compensation, absenteeism, and the other losses dermatitis can cause, will find this booklet extremely helpful.

The booklet describes working conditions in 19 different industries, the hazards these conditions involve, the type of dermatitis common in each set of conditions, and recommended preventive measures. Condensed into convenient reference form are the experience and know-how gathered over many years by field workers and laboratory technicians of the West Disinfecting Company.

The book gains extra validity and value from West's daily contact with new industrial processes, chemicals, and jobs that are constantly complicating the dermatitis picture. This is essential reading which can lead to higher morale, increased production, and lower costs. Published by the West Disinfecting Company, Dept. 16, 42-16 West Street, Long Island City 1, N. Y. *Advt.*

▲ For more details circle **NED-634 J4** on enclosed inquiry slip ▲

WHY MISS DEADLINES?



Experienced producers of stampings, Pix has the skill and the facilities to meet your needs. More . . . you get dependable supply, geared to your production schedules. Count on Pix for precision shapes in steel, nickel, molybdenum, bronzes, and many alloys. Press capacities to 150 tons. Complete catalog available.

SEND SKETCH OR PRINT FOR 48-HOUR QUOTATION

Count on PIX for Precision Stamping

PIX MANUFACTURING CO., INC. 5 Oliver Street Newark 5, N. J.

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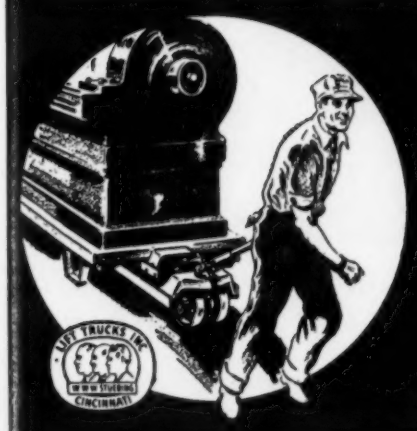
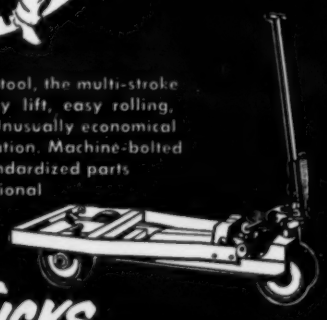
Hydromatic LIFT TRUCKS

STUEBING DESIGNED • STUEBING ENGINEERED • STUEBING BUILT



multi stroke
safety
and
economy
ease of
operation
speed

Built like a fine machine tool, the multi-stroke Hydromatic features easy lift, easy rolling, quick automatic action. Unusually economical and trouble-free in operation. Machine-bolted frame and machined standardized parts speed and simplify occasional repairs, eliminate downtime.



LIFT TRUCKS INCORPORATED

2423-2431 Spring Grove Avenue • Cincinnati 14, Ohio

▲ For more details circle **NED-636 J4** on enclosed inquiry slip ▲

PAINTING MACHINE

automatic spray mask type adaptable to various sizes and design changes

Intricate designs can be applied to various types of work pieces by this automatic spray mask painting machine, and ventilating and ducting prevent escape of vapors into the room. Pneumatic and hydraulic operation provides accurate control of speed of travel, amount of finishing material and spray gun pattern.

Four angular spray patterns per cycle eliminate shadowing from bridges and assure uniform coverage. Automatic timer has fine adjustment for any cycle from fraction of a second to as many as required for proper coverage. Simple adjustments adapt machine to various sizes and changes in design and model or work pieces. Self-contained unit requires only a single air line connection to be put in operation. Sizes with 12, 18 and 24-in. strokes are available. Made by **Sepanski & Associates,** Dept. ND-15, 900 Clancy St. N.E., Grand Rapids 5, Mich.

▲ For more details circle **NED-637 J4** on enclosed inquiry slip ▲

400-CYCLE CIRCUIT BREAKER

for polyphase circuit protection

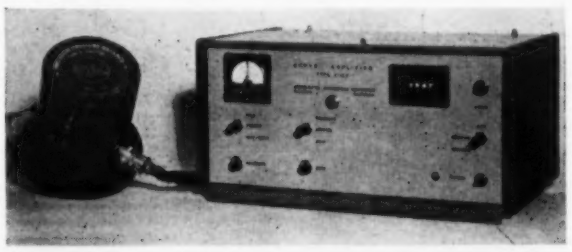
Hysteresis, eddy current and skin effect difficulties are minimized by this 400-cycle circuit breaker for protection of polyphase circuits. Two or three single-pole circuit breakers are linked together externally at the handles to form a common assembly and, when any one phase trips out, all phases are simultaneously interrupted. Kick spring within each breaker pole makes tripping force available in excess of requirements. Hydraulic-magnetic principle keeps current capacity minimum and instantaneous trip points constant, regardless of ambient temperature. One, two and three-pole models, in ratings from 100 milliamperes to 50 amp, are available. Made by **Heinemann Electric Co.,** 659 Plum St., Trenton 2, N. J.

▲ For more details circle **NED-638 J4** on enclosed inquiry slip ▲

PRESSURE BALANCE

functions in inaccessible locations

Nonmanual measurement of precision pressures is performed rapidly and accurately with the type 37-103 pressure balance, a small portable electronic instrument. It may be used in inaccessible locations. Visual digital readout counter with digits to 1000 makes immediate readings possible. Readings may be held when required, or unit can be attached to electrical tabulating devices through a built-in electrical analog output of 10 v dc. Differential, gage and absolute pressure readings are possible. The amplifier can be used with various ranges of pressure sensing pickups. Pressure balance (left) operates on dynamic force principle, while readings appear on amplifier at right. Made by **Consolidated Engineering Corp.,** Sierra Madre Villa & La Tierra St., Pasadena 8, Calif.



▲ For more details circle **NED-639 J4** on enclosed inquiry slip ▲

NEW DOOR CATALOG

IDEAS FULL OF FACTS ON KINNEAR ROLLING DOORS

HANDY

This new 1954 Kinnear catalog gives you full, up-to-the-minute information on how to save maximum space, cut costs, boost efficiency and get more protection at doorways in old or new buildings. In addition to complete data on Kinnear Steel Rolling Doors, with the famous, *Kinnear-originated* curtain of interlocking steel slats—it tells all about Kinnear Steel Rolling Fire Doors, sectional-type Kinnear RoL-TOP Doors, and the protective Kinnear Steel Rolling Grilles. Write for FREE copy!

The KINNEAR Manufacturing Company

FACTORIES
3017 Fields Avenue
Columbus 16, Ohio
1742 Yosemite Avenue
San Francisco 24, Calif.

KINNEAR ROLLING DOORS

Offices and Agents In All Principal Cities

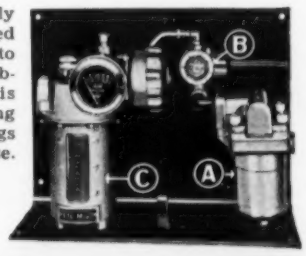
▲ For more details circle **NED-640 J4** on enclosed inquiry slip ▲

On a single rolling mill . . . also saves plenty in maintenance, lubrication time and lubricant!

Before Oil-Mist was installed on this rolling mill, temperatures ran high, expensive bearings were in danger. After Oil-Mist, temperatures dropped—so did the use of rolling coolant—$480 worth a month! Plus a saving of 24,000 gallons of preheated water a month—previously added when replacing coolant! Lubricant consumption fell from 15 or 20 *pounds* of grease *a* DAY to 2½ *gallons* of *oil a* WEEK! Lubrication time—a sixth of what it was.

Impressive? Sure, but Oil-Mist effects comparable savings on *any* machine.

Alemite Oil-Mist is a completely automatic, completely enclosed system which atomizes oil into mist—distributes it through tubing to bearings—where it is applied in a uniform, cooling coating. Suitable for bearings designed for either oil or grease.



A. Water Separator
B. Solenoid Control
C. Oil-Mist Lubricator

DELIVERS OIL TO BEARINGS THREE WAYS

Oil-Mist
For any type of anti-friction bearing—ball, roller or needle.

Oil-Mist Condensed
For plain bearings, slides, ways, vees, cams and rollers. Oil-Mist condensed to liquid.

Oil in Spray Form
Nozzle condenses mist—concentrates application. For open and enclosed gears and chains.

Free! the complete story on Alemite Oil-Mist and how it can be applied to ANY machine. Specifications, typical installations, case histories. Get yours now!

A PRODUCT OF SW STEWART WARNER

Alemite Division of Stewart-Warner, Dept. NED-94
1850 Diversey Parkway, Chicago 14, Illinois

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Faster **...** ***Quieter*** **...** wide speed range, 3 sizes.
300 lb.—lift rate 75 ft. per min.
500 lb.—60 ft. per min.
1000 lb.—40 ft. per min.

Smaller **...** one man can easily install.

Safer **...** no spark hazard ... betters all safety requirements.

More Useful **...** for shipping docks ... refineries, chemical plants, heat treating, plating .. machine shops, foundries ... appliance, furniture, textile, automobile and aircraft assembly ... stock rooms.

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FREE TIRE AND WHEEL TW ANALYSIS can solve your tire problems, reduce costs 20-50%

The B. F. Goodrich Tire and Wheel Analysis Plan has reduced industrial tire costs 20 to 50% for hundreds of users. This free service can help cut *your* tire and tire maintenance costs. Contact your local BFG retailer or mail the coupon below. Without cost or obligation a trained B. F. Goodrich man will study your materials handling operations. He will tell you what type and size tire, what tread design and compound will serve you best. The advice you receive will be unbiased, for B. F. Goodrich makes a *complete* line of industrial tires. A special TW Analysis is available for manufacturers of industrial hauling equipment.

Here is an example of premature tire failure. BFG's TW Analysis shows you the reasons for such failures, prevents reoccurrences.

Free recommendations. The TW analysis man is an expert. His study and recommendations can help you reduce tire and tire maintenance expense.

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Tire & Equipment Division
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Specify B. F. Goodrich tires when ordering new equipment

RESEARCH KEEPS B.F.Goodrich FIRST IN RUBBER

For more details circle **NED-643 J4** on enclosed inquiry slip

PORTABLE SPRAYING OUTFIT low pressure unit handles wide variety of materials

Portable Volumaire R200 spray outfit applies paint, enamel, ceramic slurries, liquid waxes and extremely viscous and colloid-suspension materials. It is powered by 7-lb 110-v universal blower which delivers air at 1½ psi and 3500 cu ft per hour and can be shoulder-slung or rested on its floor stand when in use. Gun weighs ½-lb complete with material reservoir. It utilizes one large-orifice nozzle to spray all media. Jet is precisely controllable for round or flat spray and can be varied from ½-in. line to 12-in. swath. Trigger controlled gun can be cleaned without disassembly.

Low-pressure delivery results in minimum back and overspray. It also provides material economies and permits operator to work without mask or goggles. Masking requirements are minimized and ventilators and spray booths eliminated.

Another version of the equipment (model R350) is fitted with gun and air heaters. It is used for hot spraying paint, thermoplastics and other materials whose melting point is between 175 and 400° F. Although heavier than model R200, it is still fully portable and has similar operating characteristics. Made by **Roxon, Inc.**, Dept. E, 50 Broad St., New York 4, N. Y.

For more details circle **NED-644 J4** on enclosed inquiry slip

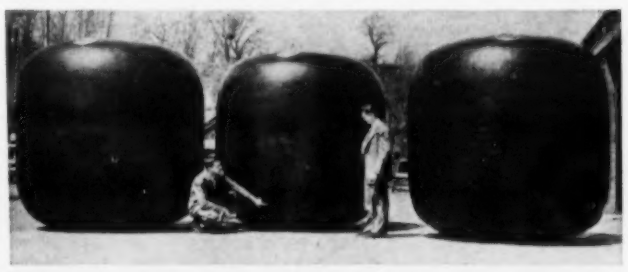
POLISHING & BUFFING HEAD has maximum float of 6 in.

Either a 10 or 15-hp, 1750-rpm motor or a 20-hp, 3500-rpm drive can be accommodated by model 52-100 full-floating, adjustable polishing and buffing head and stand unit. Vibrationless unit weighs 2500 lb and is intended for heavy buffing jobs. It has maximum float of 6 in. and can be furnished with power feed for vertical lift or horizontal traverse. Head can be assembled for either right or left hand operation and is designed especially for use with Strait-Line automatic buffing machines. It can also be used with rotary automatics or as an individual polishing and buffing stand. Made by **Hammond Machinery Builders, Inc.**, 1623 Douglas Ave., Kalamazoo 54F, Mich.

For more details circle **NED-645 J4** on enclosed inquiry slip

RUBBER-FABRIC CONTAINERS for bulk shipment of chemicals

Bulk shipment of granular and powdery chemicals or corrosive and hydroscopic materials is facilitated with 500 and 2500-gal synthetic rubber and fabric



containers which can be collapsed after emptying for return and reuse. Large unit measures 8 ft high by 8 ft diameter and collapses to an 8 x 8 x 2-ft size. Containers are built with plies of cord fabric and synthetic rubber molded into one piece. They are internally reinforced with flexible lifting cables which are attached to single lifting ring at top. Exterior and inner linings are neoprene for resistance to aging, weathering, abrasion and corrosives. Six-inch closures in each end facilitate emptying and filling. Made by **United States Rubber Co.**, 1207 Rockefeller Center, New York 20, N. Y.

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CAMBRIDGE offers you COMPLETE SERVICE on METAL SPECIALTIES

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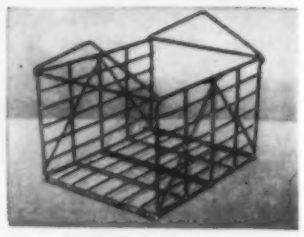
Our Engineers treat your problem as an individual one. We can prepare specific designs to solve it or we will plan production to meet your own designs. Articulated or welded—we are prepared.

FABRICATION

Our shop facilities have simplified production and minimized the human error. We fabricate to prescribed methods.



Crates, trays, baskets, racks, grids—designed and built for your specific materials handling, heat-treat and corrosion resistant end use.

Let us tell you about our welded and articulated structures. We work in all alloys, on any quantity. We're in the classified section of your 'phone book, listed under "Baskets-Wire."

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1500 SPECIAL SIZE DIES ON HAND

Whitehead makes washers and shims from any metal or special material to your specifications. Thickness from .002" to ⅜".

In stock: **S.A.E. standard light, medium, and heavy steel washers; brass and copper, small and large patterns; bolt sizes.**

Get this catalog for your files by writing Whitehead at Detroit.

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WHITEHEAD STAMPING CO.
EST. 1903

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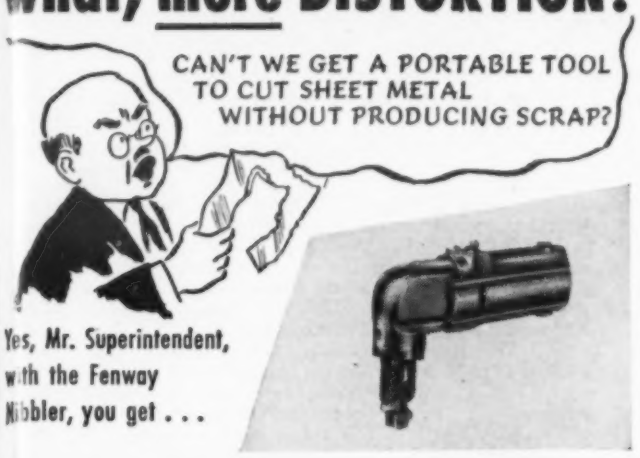
what, more DISTORTION!



Yes, Mr. Superintendent, with the Fenway Nibbler, you get . . .

The proven tool for maintenance, repair or specialty work on all sheet metal up to 14 gauge stainless steel or 16 gauge titanium. It works in "hard-to-get-at" spots with complete safety.

Portability that saves time . . . Versatility—it's a bench or hand tool . . . Distortionless cutting . . . Replaceable punch and die.

Ask for a demonstration of the Fenway Nibbler. No obligation. Write Dept. NE.

FENWAY MACHINE COMPANY
263 N. 23RD STREET PHILADELPHIA 3, PA.
Distributors in principal cities.
In Canada: James Morton, Ltd., Galt, Ont.

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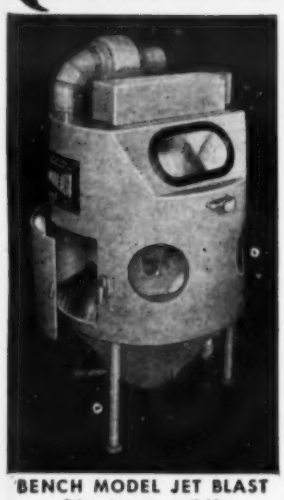
CLEANS METAL PARTS
BETTER • FASTER • CHEAPER

NEW LOW COST BENCH MODEL **JET BLAST**



BENCH MODEL JET BLAST
Other sizes are available

SAVES UP TO 60% IN LABOR COSTS

JET BLAST REMOVES Rust, scale and Foreign Deposits from Dies, Molds, Tools or other precision articles without dimensional alterations. Increases adherance and bonding qualities of paint, porcelain, rubber, electroplated metals and a host of other materials . . . Equally effective for cleaning threads for close, smooth fit.

JET BLAST will give any desired finish on flat or irregularly shaped objects . . . Sharp edges are retained.

JET BLAST is excellent for light burring on hard to-get-at surfaces.

JET BLAST materially increases tool life when used for honing cutting faces after grinding . . . Eliminates costly hand labor.

JET BLAST IS A TOOL ROOM NECESSITY

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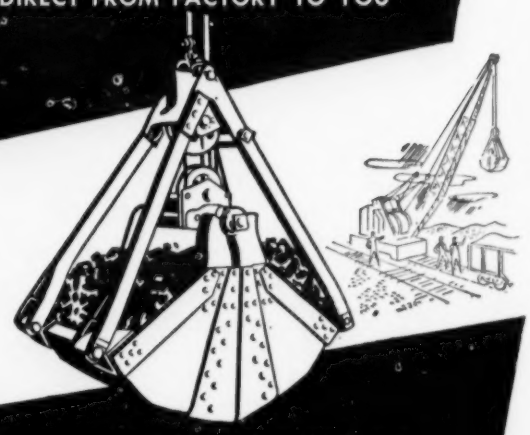
—for less money
DIRECT FROM FACTORY TO YOU



ROPE-REEVE, POWER WHEEL AND LINK TYPE
Write for illustrated catalogue
INDUSTRIAL BROWNHOIST CORPORATION
BAY CITY, MICHIGAN

146

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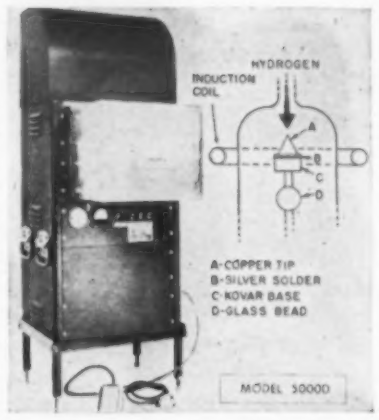
INDUCTION HEATER features rapid heating



Typical application for model 5000 high speed induction heater is the soldering of the copper tip on the "keep-alive" electrode of a gas switching tube in 1/10-second. Unit provides its own controlled hydrogen atmosphere and requires no flux. Tip is soldered to a kovar base projecting only ¼-in. beyond a glass bead and is done so quickly that the bead remains unheated. Other applications for the high speed heater include hardening, annealing, brazing and welding. Heavy duty aluminum tank capacitor discharges completely, retaining no residual charge. Made by **Radio Frequency Co.**, 46 Park St., Medfield, Mass.

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PROPORTIONING PUMP meters 5 cc to 6-gal quantities

A wide output flow range, easily adjustable by light finger pressure, is feature of this packless, positive displacement, fully enclosed proportioning pump. Quantities from 5 cc to 6 gal per hour feed can be metered accurately. As low as 3 cc per hour can be handled with good consistency. Standard speeds range from 27 to 900 strokes per minute, and pressures up to 2500 psig are developed. Gases and vapors are vented automatically. Regulation is adaptable to automatic control, utilizing direct instrument air signal. Ganging is accomplished by simply connecting additional units to basic meter. Adjustments can be linked for simultaneous and identical action. Made by **Hills-McCanna Co.**, 2455 W. Nelson St., Chicago, Ill.

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Protective Coatings

Arbonite Corp.—Applications of Plastisol protective coatings for large metal structures (exhaust system manifolds and hood funnels) and television tube conveyor racks are described and illustrated in this file-folder.

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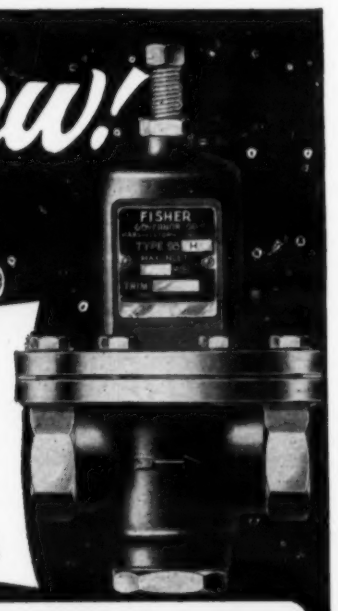
New!



FISHER®
Large Capacity SERIES 95 PRESSURE REGULATOR

For steam, air, gas, oil, water or other fluid. Sizes ¼", ⅜", ½", ¾", 1". Outlet pressures from 2 to 30 psi; 15 to 150 psi. Easily installed—no external control lines.

Bulletin C-95 illustrates and describes new internal construction features which give higher capacity and close regulation. Write for your copy today.

FISHER GOVERNOR COMPANY
MARSHALLTOWN, IOWA

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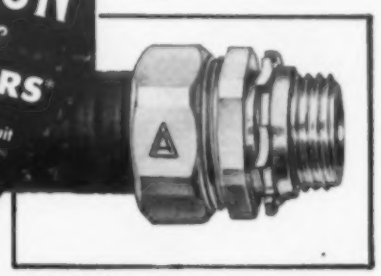
APPLETON "ST" Series CONNECTORS for Liquid Tight Flexible Conduit

UNIQUE *Appleton Construction*



Quick, Easy to Install!

No Other Liquid Tight Connectors Have The Exclusive APPLETON Brass Ferrule

● Only *Appleton* "ST" Series Connectors have the brass ferrule that screws and crimps on for a perfect seal and positive ground . . . *always!* Nothing to come loose, deteriorate, crack or break! That's why these unique connectors assure positive exclusion of liquids, fumes, chips and other matter from machinery electrical systems . . . and a permanent ground between conduit and connectors that maintains voltage unfailingly within 10 millivolts drop.

Appleton "ST" Series Connectors come straight to fit flexible conduit from ⅜" to 4". Also, 45° and 90° to fit flexible conduit from ⅜" to 2". For complete information about these truly unique connectors that avoid wiring system failure write, *today!*

APPLETON ELECTRIC COMPANY
1758 Wellington Avenue • Chicago 13, Illinois
Also Manufacturers of

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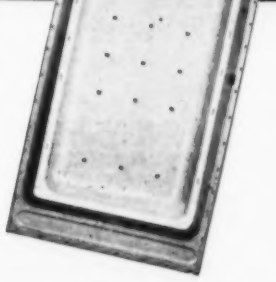
need volume production?



get it here—in ***plastics*** *molded by General American*

Manufacturers who never dreamed of using plastics for parts or products are getting results they've always wanted at General American's huge plants!

Big Volume Production—fast, at low cost, with color, fine finish and difficult designs *molded in*. These products are molded on batteries of injection presses ranging up to 300 ounces, compression presses up to 2,000 tons, and a variety of sizes of reinforced plastics presses.

New Sales Appeal, New Products, New Ideas can take shape when General American's start-to-finish facilities join your team. Experienced men with equipment unmatched anywhere will work with you on every phase of production.

Talk over your requirements and ideas with a General American engineer.

GENERAL AMERICAN Plastics Division

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Standard -Verson- Press Brakes

Available from Stock!

● Quality-built standard Verson Press Brakes offer the small shop big brake standards of design and construction at modest cost. For the big shop they offer an economical way to avoid tying up big machines on odd jobs. Write for descriptive bulletin.

-Verson- VERSON ALLSTEEL PRESS CO.

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POLYPENCO® NYLON SHAPES

Save with nylon tubular bars!

- Get nylon's advantages economically in gears and rollers by making outer sections from tubular bars.
- Make bearings, bushings, packings, and other wear parts with minimum waste of nylon.
- Use metalworking tools . . . end high tooling cost.
- Sizes from 2" to 10" O.D. with ⅜" to 1½" walls.
- Uniform high quality . . . technical help.

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The POLYMER CORPORATION of Penna. • Reading, Penna.
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POLYPENCO® NYLON ... teflon* and other non-metallics

Stocks: Reading • Chicago • Los Angeles • Newton (Mass.) • Branford (Conn.)
*trademark for DuPont tetrafluoroethylene resin

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FREE SAMPLE

- Makes and keeps belts soft and pliable
- *Pliable* belt "clings" to "surface" of pulley
- Dissolves hard "glaze" that makes belts slip
- *Only* belt preservative that has met and passed U. S. Government Tests and Requirements
- Sold with money-back guarantee since 1896

Cling-Surface Company, Inc.
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Please send me FREE sample can of Cling-Surface "50" Belt Preservative
Name.....
Title.....
Company.....
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MOTION PICTURE PROJECTOR
for heavy-duty, continuous use

A 1000-w incandescent lamp which throws 500 lumens of light on the screen is featured by this 614 commercial JAN 16mm sound motion picture projector which is designed for operating continuously for many hours. The portable, single case unit features "building block" or unitized construction in which major components are built as self-contained units and mounted on a mechanism plate. It has sapphire film guides and Carboloy-steel shuttle for long wear. If loop is lost because of torn film perforation, operator can automatically adjust film loop without interrupting show by pressing button. Unit has built-in 5-in. speaker and 2-in. f-1.6 lens. Made by **Bell & Howell Co.**, 7174 McCormick Rd., Chicago 45, Ill.

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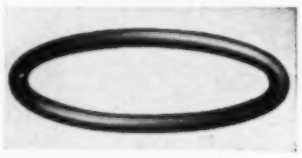
O-RING PACKING
for static and dynamic applications



Molded Palmetto O-ring packing is designed for use in either dynamic or static applications. It is an addition to a line including the G-T ring, which is used for pressures up to 15,000 psi. Made by **Greene, Tweed & Co.**, 333 Elm St., North Wales, Pa.

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PORTABLE MELTING POT
working capacity is 3½ gallons

Asphalt, tar, pitch, resin, mastic and other viscous materials can be melted in the 12 x 17-in. portable electric pot. It weighs 15 lb and has a working capacity of 3½ gallons. Operation is from any 115-v, 60-cycle outlet. The 1250-w unit has 1¼-in. thick fiberglas insulation around the heating chamber and Nichrome wire heating elements. Made by **Glas-Col Apparatus Co.**, Dept. ND, 711 Hulman St., Terre Haute, Ind.

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NOW, you can see, right in your office Every time a machine STANDS IDLE—and how long!

with electrical Model M SERVIS RECORDER

The Servis Recorder Chart (sample portion below) instantly shows all stops and delays. So you can reduce downtime, increase production and thus repay the cost of Servis Recorders *many times over!*... Also valuable in time studies to set rates and to check exactness of process operations.

FEATURES OF NEW MODEL M
• Visible, electrical recording • Location anywhere, distant from machines • No ink, no pen to obscure chart • Far *lower* cost than comparable devices.

WRITE FOR "MODEL M" FOLDER

THE SERVICE RECORDER CO.
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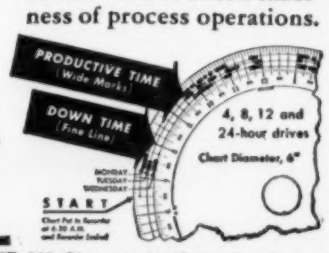
Cleveland 15, Ohio



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Variac® SMOOTH VOLTAGE CONTROL

The most popular of the many models of the VARIAC® continuously-adjustable autotransformer is the Type V-5MT. With a power rating of 860 va, it will control a maximum of 7.5 amperes over a 0 to *115*-volt output range, or a maximum of 5 amperes when connected to supply output voltages from 0 to *135* volts, both from 115-volt a-c lines.

As are all "V" models, the Type V-5MT has DURATRAK brush track construction . . . exclusive with G-R . . . which insures extra-long life, ability to withstand initial surges ten times the rated current, and very low maintenance.

This popular unit is equipped with 6-foot line cord, line switch and convenience outlet. For general experimental and laboratory use the Type V-5MT, priced at $25.00, has found universal acceptance.

Let us tell you about G-R's complete line of VARIAC autotransformers.

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90 West St. NEW YORK 6 · 8055 13th St., Silver Spring, Md. WASHINGTON, D.C.
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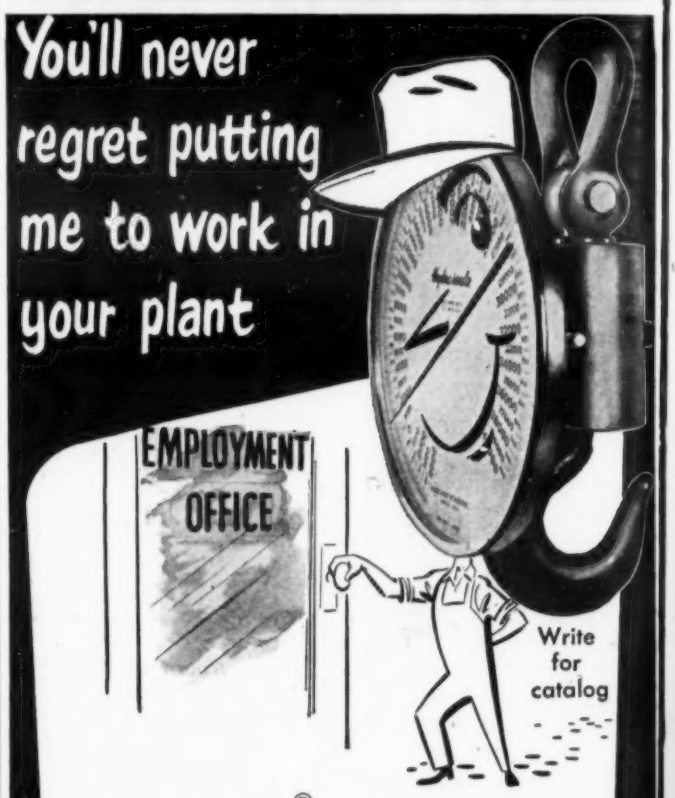

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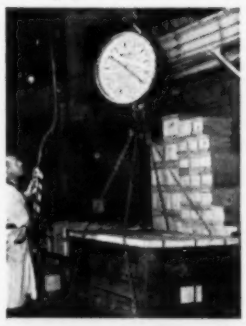
I'm Hydroscale—I'll go to work at a price you can well afford—Guard you against losses—Watch weights on the dock, in production and processing—Help you make money as well as save it! My buddies are on the job from coast to coast eliminating the expense and inconvenience of ordinary weighing stations, making weighing practical and convenient—a part of your handling operation.



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Over 60 standard models 500 to 200,000 lbs. Pound-Kilogram models, Batching models, etc.

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Industry's Most Versatile Heat Source

CHROMALOX Electric Strip Heaters

EASY TO INSTALL Chromalox Strip Heaters give dependable, accurately controlled heat where and when heat is needed. They produce uniform and exact temperatures by automatic or manual controls. Low initial installation and operating costs are among their many advantages. Get details now about Chromalox Heaters for heating liquids, gases, platens, molds, moving parts, etc.

Write for Catalog 50

It describes many Chromalox Electric Heaters and tells how to apply them.

Industrial Div., EDWIN L. WIEGAND CO., 7509 Thomas Blvd., Pittsburgh 8, Pa.

See other Ad on pg. 4

CHROMALOX

ELECTRIC HEAT FOR MODERN INDUSTRY

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SMALL AIR CYLINDER PACKS POWERFUL PUNCH

At 100 lbs. air line pressure this Super-Speed 2½" bore Bellows Air Motor develops enough force to punch a ½" diameter hole through 1/16" thick mild steel. The speed of the piston rod is six to ten times the maximum speed of a standard air cylinder of the same bore.

BUILT-IN VALVE AND CONTROLS

The Super-Speed Bellows Air Motor comes complete with either a built-in manually operated valve or the Bellows Electroaire electrically-controlled valve, with or without safety controls. Standard stroke length: 2", 2½", 4", 6", 9" and 12".

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Learn how you can use Bellows "Controlled-Air-Power" to produce more — at less cost. Address The Bellows Co., Dept. NED 954.

THE Bellows CO.

AKRON 9, OHIO 1438

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UNIT 357 MOBILE CRANE

ALL models CONVERTIBLE to ALL attachments!

• SELF-PROPELLED
• RIDES ON RUBBER
• HAS 1001 USES

Faster material handling — less cost!

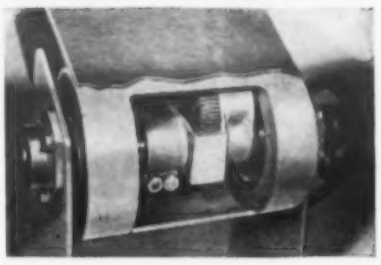
The "357" is a typical one-man UNIT crane . . . compact, powerful, works fast at low cost even in cramped space, inside your plant or out in yard . . . great for lifting, loading, unloading, material-handling of steel, pipes, bars, lumber, bulk materials and equipment . . . moving, erecting, dismantling machinery. Easy to operate . . . 360° swing . . . full-vision cab assures complete visibility, an aid to speed and safety. Catalog has complete data. Write for your copy.

UNIT CRANE & SHOVEL CORP.

6607 West Burnham Street • Milwaukee 14, Wisconsin, U. S. A.

▲ For more details circle NED-670 J4 on enclosed inquiry slip ▲

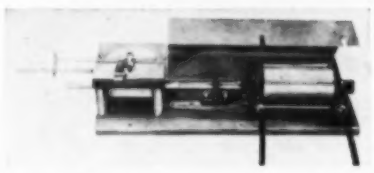
CONVEYOR DRIVE
various diameters and face widths



All types of belt conveyors can make use of the Concentro-Drive, a gear reduction unit inside of a pulley, with input shaft concentric with the pulley. Driving is through the dead shaft. Units are made in double and triple reduction models, with spur gears sealed in the case with lubricant. Drive units are made in diameters from 4 to 30 in. with face widths to suit. Use can also be as chain sprocket head shaft drive. Ratios range from 14.40 to 275.76. Made by **Concentro-Drive Co.**, Dept. NED, Tipp City, O.

▲ For more details circle NED-671 J4 on enclosed inquiry slip ▲

WIRE FORMING MACHINE
also does strip and tube bending



Up to 1500 bends in wire or strip can be made per hour by this pneumatic wire forming machine. Air cylinder develops 1000 psi pressure at 100 psi line pressure. Any degree bend up to a complete loop and up to a 2-in. radius can be made. Capacity of machine using steel is ¼-in. With more ductile metals, larger sizes can be handled. Bench mounted unit has heavy steel base and is controlled by foot pedal. Machine is furnished with air gage, hose and fittings for attachment to air line. It can also be adapted to tube forming. Made by **Car-Anth Mfg. & Supply Co.**, 417 Eichelberger Ave., St. Louis 11, Mo.

▲ For more details circle NED-672 J4 on enclosed inquiry slip ▲

HEAVY-DUTY ROD CUTTERS
in capacities up to 9/16-in.

Leverage has been substantially increased in line of Hardy heavy-duty cutters for cutting concrete reinforcing rod, hard bolts, chain, high-strength steel

strand and guy wire. Maximum service life has been increased with no appreciable increase in weight through use of new alloys and heat treatment techniques. Cutters in capacities up to 9/16-in. are available. Made by **Interstate Drop Forge Co.**, 4051 N. 27th St., Milwaukee 9, Wis.

▲ For more details circle NED-673 J4 on enclosed inquiry slip ▲

You can provide easy mobility to a variety of industrial products with

IRONBOUND ALL-PURPOSE HANDLING UNITS . . .

POPULAR IRONBOUND FLO TRUK

• An easy to handle ruggedly constructed unit for carrying bulky and heavy loads at lowest cost. Seven standard sizes with one or two push handles makes it easy to select the proper truck for your requirements. Ask an Ironbound engineer for suggestions.

The HANDY for furniture and similar items.

The HAULER for cases, crates, tote boxes, etc.

The HUSKY for general use throughout the plant.

THE IRONBOUND "SAFETY-SKID" WITH ROUND CORNERS

Ironbound construction assures long hard use with complete safety to product and operator. Still the time proven method for handling of materials efficiently and economically.

IRONBOUND BOX & LUMBER COMPANY

Materials Handling Division

55 HOFFMAN PLACE • HILLSIDE, N. J.

MANUFACTURERS OF QUALITY BUILT SKIDS, SEMI-LIVE SKIDS, FLOOR TRUCKS, ROLL TRUCKS, DOLLIES AND PRY BARS

▲ For more details circle NED-674 J4 on enclosed inquiry slip ▲

HARDWOOD LAMINATED Bench Tops

• Counter and Table Tops
• Locker Bench Tops
• Special Glued Forms

FROM the drying of the lumber in Sensenich's own kilns* to the cutting, forming and gluing of every hardwood laminated top, the highly trained Sensenich craftsmen play an important part. These skilled workmen use the finest equipment to produce high quality wood parts with thorough efficiency and economy. Remember too, Sensenich is the world's largest producer of wood propellers for personal planes. Sensenich has more than 20 years experience in conditioning, cutting and gluing wood forms to the most exacting standards.

We will be glad to quote on your requirements . . . your request will receive prompt attention.

SENSENICH

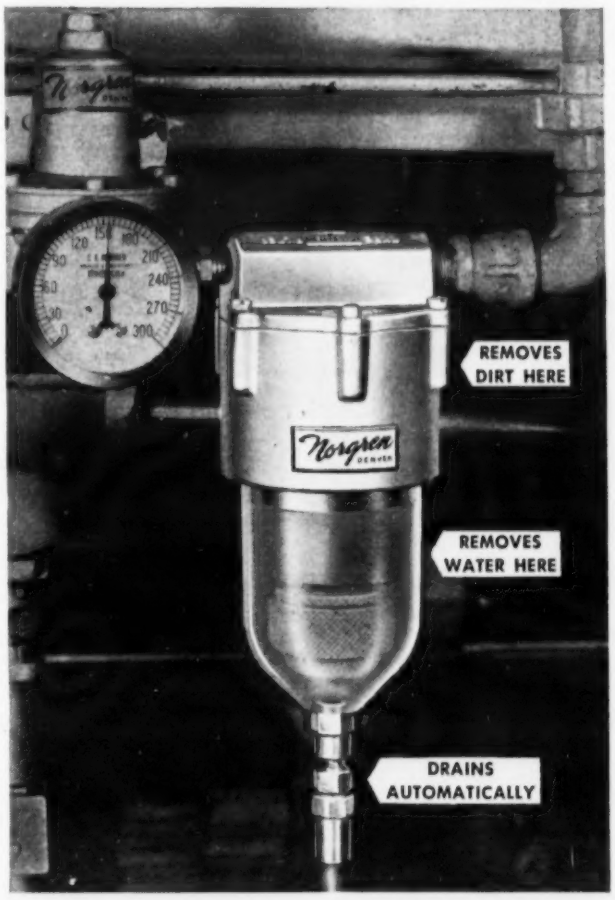
*Certified by the United States Air Force

SENSENICH CORPORATION

Dept. ND, Lancaster, Pennsylvania

▲ For more details circle NED-675 J4 on enclosed inquiry slip ▲

PROVED PROTECTION for AIR EQUIPMENT . . . with Norgren AUTOMATIC-DRAIN FILTER



The new NORGREN AUTOMATIC-DRAIN FILTER operates automatically, whether air pressure is constant or fluctuating, whether or not air is flowing . . . assuring clean, dry air, without attention.

Performance data prove its efficiency — ***100% water removal*** up to flow of 20 cfm, 90% at flow of 30 cfm . . . at 80 psi primary pressure and flow of 35 cfm ***pressure drop across filter is only 1 psi.***

WRITE FOR NEW CATALOG NO. 600

PIONEER AND LEADER IN OIL FOG LUBRICATION FOR 26 YEARS

C. A. Norgren CO.

3405 So. Elati, Englewood, Colo.

VALVES • FILTERS • REGULATORS • LUBRICATORS
HOSE ASSEMBLIES

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More than 20,000 VIKING PUMPS IN THE LAST 25 YEARS on Littleford Bros. Equipment

You, too, can be assured of top pumping performance. Follow the example of Littleford Bros., Inc., Cincinnati. They know what Viking pumps can really do after incorporating over 20,000 of them on their road construction and maintenance equipment. Service includes handling hot or cold road oils, tars, asphalt, cutbacks and emulsions.

If you are looking for dependable pumps as original equipment, or for individual performance follow Littleford's example and learn more about Vikings. Write for bulletin 54SG.

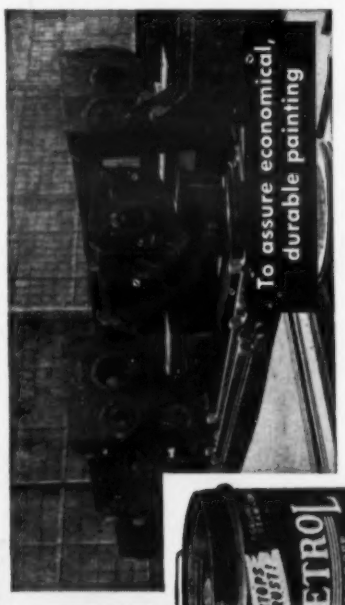
VIKING AN HONORED NAME IN PUMPING

See Our Catalog in SWEETS

VIKING PUMP COMPANY CEDAR FALLS, IOWA

For more details circle NED-677 J4 on enclosed inquiry slip

TO STOP RUST! THE CLEVELAND CRANE & ENGINEERING CO. USES PENETROL® CLEAR AIR-DRYING OIL



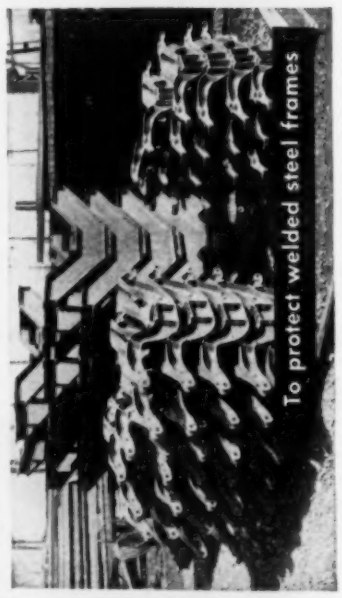
This property provides an exceptional bond or "tooth" for the following paint coat, but does not interfere with the easy application of the paint.

Use the time-proved, money-saving, structure-preserving PENETROL method to assure protection against rust to all inside, hidden, and exterior surfaces. Order PENETROL now!

PENETROL is manufactured by THE FLOOD COMPANY, Hudson, O.

PENETROL INDUSTRIAL PRICES: 5 Gal. $15.75; 30 Gal. $88.50; 55 Gal. $159.50. F. O. B. Hudson, Ohio. FREE LITERATURE!

protection against rust and corrosion during outside storage. Transparent PENETROL coating permits visual inspection. Later, castings are machined without objectionable fumes. PENETROL has been used by the railroad, steel, shipping, oil, transportation and other industries for over 20 years . . . *to assure quick, long-lasting protection against rust and corrosion, with a minimum of money and labor!*



. . . renders the rust completely inactive . . . and forms a tough protective film. This PENETROL film has exceptional adhesive qualities . . . dries in 18 to 36 hours to a slight surface tack.

The Cleveland Crane & Engineering Co., Wickliffe, Ohio, uses the versatility of PENETROL to serve many important requirements.

Welded steel frames (above) are coated with clear PENETROL for protection against weather, and to provide a receptive, firm-holding bonding agent for final paint job.

T-rails and angles (center) are coated with PENETROL to preserve "new" appearance of metal, eliminate loss to scrap-pile by stopping corrosion, and stop wasted man hours in cleaning metal for paint operation.

Load bar castings (at far right) are dipped in PENETROL for

For more details circle NED-678 J4 on enclosed inquiry slip

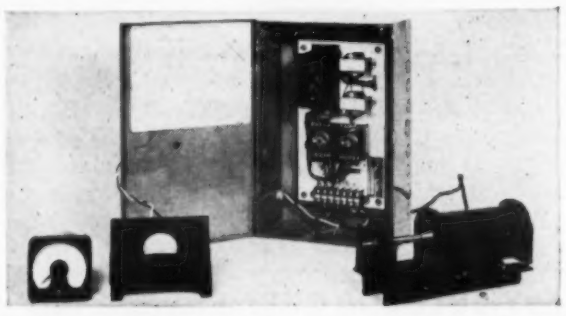
EARTH BORING MACHINE
portable unit is one-man operated

Holes of up to 16-in. diameter can be bored in the earth at any desired angle and at high speeds using Super Hole-A-Matic one-man machine. Applications include soil testing, making concrete pier holes, pipe line installation and other similar jobs. Portable tool, which requires a source of electric power for operation, has pulverizing and grinding action which permits its use in all types of soil. In one test, it dug the hole for a 12-in. expanding plate anchor with a 10-ft rod in 8 minutes. Made by **Multi-Matic Corp.**, Dept. 250, 14741 Bessemer St., Van Nuys, Calif.

For more details circle NED-679 J4 on enclosed inquiry slip

POSITION TRANSMITTER
returns machine to previous position

Operator of a machine moving in a straight line can return it to a previous position within 1 per cent accuracy with electric position transmitter for linear



motion. Originally developed for use on a roller leveler in the steel industry, it consists of a transmitter on the machine, a control panel at any convenient place and an instrument at the operator's control station. Unit will transmit total travel in ranges from 5/8 to 3 in. Made by **Control Products Co.**, 186 Noblestown Rd., Oakdale, Pa.

For more details circle NED-680 J4 on enclosed inquiry slip

Aluminum Duct Systems

Kaiser Aluminum & Chemical Sales, Inc.—32-page technical booklet "The Design of Aluminum Duct Systems" provides practical data on friction losses in air conditioning duct systems. Information is based on experimental tests demonstrating smoothness of aluminum compared to galvanized iron ducts. Step-by-step design procedures for sizing round or rectangular ducts conclude the booklet.

For more details circle NED-681 J4 on enclosed inquiry slip

Only 90 seconds to drill 3½" holes through 4" concrete slab with TRUCO WATER SWIVEL and TRUCO SWIVEL DIAMOND DRILL BITS

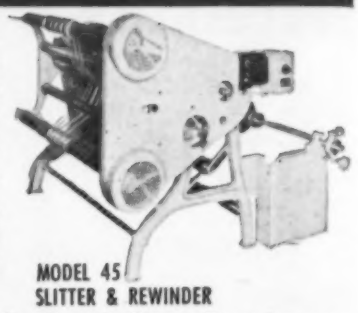
This combination can drill at high speed in hardest aggregates with only 150 lbs. pressure and ½" H.D. motor as against 1,000 lbs. pressure and 1"-1¼" H.D. motor specified for other tools. Truco combination can drill *reinforced concrete;* amazing drilling speed in brick, granite, ceramic tile, marble. Truco Water Swivel and Truco Swivel Diamond Bits can easily pay for themselves on your first job. Write for folder:

WHEEL TRUEING TOOL COMPANY
55-3200 West Davison Avenue • Detroit 38, Michigan

For more details circle NED-682 J4 on enclosed inquiry slip

NOW! CHOOSE THE HOBBS SLITTER BEST FOR YOUR MATERIALS!

From our three types of Hobbs cutters, use the best for your materials—shear-type, rotary contact, or razor-type. Easily handle tender, delicate film as well as heavier weights of paper, plastics and treated fabrics.



MODEL 45 SLITTER & REWINDER

Hobbs Slitters and Rewinders (formerly "Jacques") are low-cost, low maintenance machines. Warner electric clutch and brake enable smoother starts and stops—protect light materials. Adjust power to clutch simply by turning rheostat button! Three models now available to cut widths up to 30", 40", 45". Special design frictions rewind up to 18" diam. Some materials up to 20/1000" thick.

Send now for new, free booklet. Ask about free factory test run, using your material.

HOBBS MANUFACTURING CO. 41 Salisbury St., Worcester 5, Mass. EST. 1883

New York Office: 132 Nassau Street
Chicago office: 549 West Washington Blvd

Manufacturers of Modern Converting Machinery

For more details circle NED-683 J4 on enclosed inquiry slip

Sure! Turner can furnish ordinary 3 or 4 speed transmissions—BUT . . . Turner can ALSO furnish 6 or 9 speeds for AS LITTLE AS $10 to $20 ADDITIONAL . . .

Now, for slight added cost you can have 6 or 9 speeds at the "twist of a wrist." Models range from fractional to 60 H.P. Wide range of applications on machine tools as well as other equipment. Write for specification and descriptive catalog.

See your dealer or write for further details

TURNER UNI-DRIVE Company
3485 Terrace Street Kansas City 8, Missouri

TURNER 3R3 UNI-REDUCER

New simplified speed reducer mounts on motor shaft with d torque arm to frame or base. Fits standard motors 1 to 5 H.P., 1800 RPM; 1 to 3 H.P., 1200 RPM. Reduction ratio 3.04 to 1. Write for information.

For more details circle NED-684 J4 on enclosed inquiry slip

LAWLOR MOP WRINGERS

FOR EASIER MOPPING GET A LAWLOR NO. 2

EASIEST turning wringer made: there are bearings at ends of rollers.

EASY to bring rolls together: foot lever is perfectly balanced.

Copied but never Duplicated!

EASY to move wringer: self-adjusting front casters raise metal feet from floor when you're ready to go.

The LAWLOR No. 2 accommodates any standard round, galvanized pail up to 16-quart capacity. Net weight of wringer—23 pounds.

LAWLOR No. 6 TWIN is like the No. 2 Wringer in general construction, but accommodates two pails.

Write for Catalog of Mop Wringers, Tanks, Cleaning Equipment for every kind and size floor.

S. C. LAWLOR CO.
Quality Floor Equipment for 50 Years
131 N. ABERDEEN ST. CHICAGO 7, ILL.

For more details circle NED-685 J4 on enclosed inquiry slip

NOW!

ONE TORCH HANDLES ALL YOUR JOBS!

AIRCO®

NEW AIRCO JET MIXER
completely stabilizes flame of the 800 Torch

NEW AIRCO 2800 CUTTING ATTACHMENT
for 800 Torch cuts steel up to 8" thick!

New Airco Jet Mixer provides perfect flame stability with all gas flows, within a welding and heating tip size range of 0 to 14 inclusive. Redesigned Airco 2800 heavy-duty cutting attachment takes Airco standard cutting torch tips . . . cuts steel up to 8" thick! Medium-duty attachment available for lighter service. Send for your free copy of Catalog 818—"Hand Torches for Cutting and Welding."

AIR REDUCTION
60 E. 42nd Street
New York 17, N. Y.

Divisions of Air Reduction Co., Inc.
Air Reduction Sales Co.
Air Reduction Pacific Co.
Represented internationally by Airco Company International

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You need U. S. GRIZZLY Uskorona-insulated Power Cables

Here's an illustration showing how ozone can chew up a sturdy, rugged cable. This can never happen with United States Rubber Company's famous Grizzly® Power Cables insulated with Uskorona® compound which prevents electrical failure caused by ozone (Uskorona-1 oil base compound or Uskorona-2 butyl rubber compound). Uskorona meets (and in many ways exceeds) the applicable IPCEA specifications for ozone-resistant rubber insulation.

As the only wire manufacturer that grows its own natural rubber, produces its own synthetics and makes its own plastics (as well as the bulk of its own rubber-compounding chemicals and ingredients), United States Rubber Company is able to make certain that only the finest materials are used in the insulations for its own wires and cables. These materials are expertly compounded according to methods devised after years of research and experimentation in "U.S." laboratories. Finally, U.S. Rubber's practical "know-how" contributes its important part to the uniform high quality of every "U.S." insulation. This "know-how" is the result of 68 years of successful manufacture of electrical wires and cables, and over a century in the making of fine rubber products.

U. S. Grizzly Uskorona-insulated Power Cable, 5,000 Volts, type RR, 3 conductor, shielded, Neoprene jacket.

Send for free catalog giving full information about U. S. Electrical Wires and Cables.

UNITED STATES RUBBER COMPANY
ELECTRICAL WIRE & CABLE DEPARTMENT
ROCKEFELLER CENTER, NEW YORK 20, N. Y.

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ISOTOPE RADIOGRAPHY MACHINES inspect steel, other dense materials

Designed for radiographic inspection of castings and other parts, portable machine utilizes radioactive isotopes to produce pictures on film of specimen's internal structure. Machines generate sufficient power to penetrate steel plate up to 8-in. thick. Three models are available, one of which can be carried by hand, the others being carriage-mounted for pushing to the work. Units are adaptable to protruded source, panoramic, penstock and stereo techniques in addition to standard type exposures. They are easily operated and do not expose personnel to harmful amounts of radiation. Isotope annual replacement requirements can be purchased for about $75.00. Made by **Gamma Industries, Inc.**, Box 2271, Baton Rouge, La.

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DUAL FUEL BURNERS for use on all types of furnaces

Burning of heavy oil on very low fire in a cold furnace is possible with the series 214 dual-fuel burner. designed to burn heavy or light oil and gas. Sizes with 4, 6 and 8-in. main air connections are made at present, with larger and smaller units under development. Main air can be supplied at any pressure up to 16 oz per square inch at the burner, with capacities at this maximum pressure being 24,400, 70,200 and 146,000 cfh, respectively. Atomizing air pressure must be at least 14 oz for light oil and 22 oz for heavy oil. Burners may be operated double rich or lean on gas or light oil. Provision is made for mounting flame safety equipment. Made by **North American Mfg. Co.**, 4453 E. 71st St., Cleveland 5, O.

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Heavy-Duty Air Compressors

Joy Mfg. Co.—36-page bulletin A-72 illustrates and describes series 100 Class WN-114 heavy-duty air compressors. Seven models of single unit style provide displacement capacities ranging from 1186 to 1948 cfm, while twin units furnish up to 3896 cfm. Two-stage double-acting compressors are of four-cylinder semi-radial design.

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Industry's safest safety curb!

— one of five safety features you get in every Magcoa Dockboard

When you buy a Magcoa Dockboard you have two main things in mind—to increase loading efficiency and speed, and *to increase loading safety*. The exclusive Magcoa Dockboard safety curb helps you do both . . . with the emphasis on safety. That's what a safety curb is for.

Experience with thousands of curbs helped Magcoa develop the original engineered safety curb, designed to increase safety by preventing equipment run-offs. Furnished in different sizes for varying load and handling equipment requirements, the Magcoa Dockboard safety curb is the most widely used, and safest, safety curb in industry today.

Magcoa Dockboards safer five ways:

- Rounded curb-ends for easier turns—important on narrow docks.
- Quarter-round safety curbs—sized for equipment and load requirements, to deflect wheels, prevent equipment run-offs.
- Permanent, raised-pattern safety tread plate to assure safe, positive tire traction—or long-wearing abrasive finish.
- One-piece hand-holds at all corners, molded to fit the hand for complete safety in lifting, positioning.
- Rugged, bridge-built safety spans for extra strength and to eliminate dangerous slipping.

Write today for your free new *Dockboard Facts File.*

MAGNESIUM COMPANY OF AMERICA
MATERIALS HANDLING DIV. • EAST CHICAGO 6, IND.

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Stainless Fabrication:

UNIFORMITY OF WELD METAL REDUCES REJECTS

Reports from users indicate that Arcos Rods and Electrodes are lowering substantially the reject rate on many stainless welding jobs. An important factor in this time and money saving picture stems from Arcos quality controls in manufacture. The consistent uniformity of Arcos weld metal provides a sure stepping stone to improved welds. To get started, write today for "What Electrode Would You Use."

ARCOS CORPORATION
1500 South 50th Street, Philadelphia 43, Pa.

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In SHOP BOXES little things make a BIG difference!

STYLE A

...you'll benefit from these **UNION METAL** *advantages*

- **Built-In Wear Runners** give years of extra wear at no extra cost.
- **One-Piece Bottom and Ends** for added strength where it's needed most.
- **14-Gauge One-Piece Drawn Angle Corners,** more sturdy than the conventional **flat strips.**
- **Flexible Tooling** permits special box dimensions without premium prices.
- **Prompt Shipment** on all common and unusual types of steel shop boxes.

Send for Bulletin MH-807A for information and dimensional data. Address The Union Metal Manufacturing Company, Canton 5, Ohio.

UNION METAL
Material Handling Equipment

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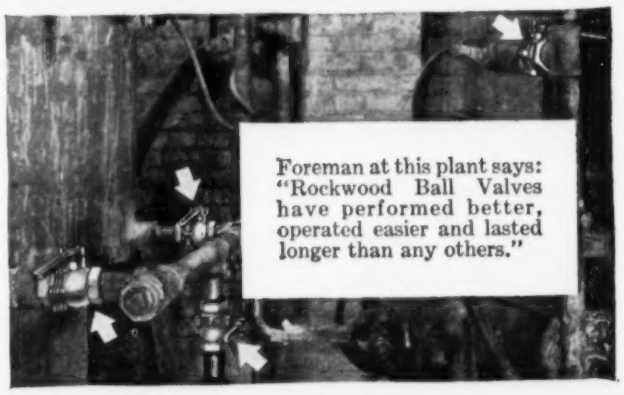

Do you need a FULL-FLOW VALVE?

FULL-ROUND-FLOW in ceramics plants, where Rockwood Ball Valves, handling clay-and-water mixtures, protect product quality by preventing air bubbles caused by turbulence in conventional valves. What are *your* applications?

Other features — positive leakproof seating; quick opening and closing and extra wear-resistance. Tested and listed by Underwriters' Laboratories, Inc. Write for complete details. Rockwood Sprinkler Company, 509 Harlow Street, Worcester 5, Mass. Distributors in all principal cities

ROCKWOOD FULL-FLOW BALL VALVES
THE FLOW IS AS ROUND AS THE PIPE ITSELF

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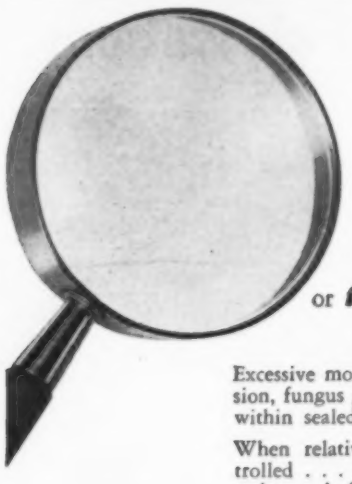

you may not see it . . .

or *feel it,* but *it's there!*

Excessive moisture vapor causes corrosion, fungus growth and other damage within sealed containers.

When relative humidity is not controlled . . . Precision equipment corrodes and fails. Optical instruments fog and are temporarily useless. Electronic and radio equipment lose efficiency. Certain foods and drugs lose freshness or deteriorate.

DriAire offers proven solutions to many of these problems. As the largest manufacturer of moisture control devices, DriAire welcomes any problems of humidity control and indication. Your inquiries are invited.

DRIAIRE **DriAire** INCORPORATED

SOUTH NORWALK, CONNECTICUT

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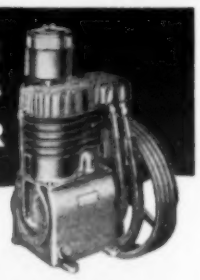
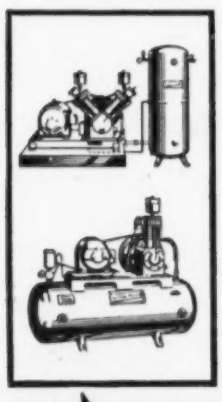
MORE FREE AIR PER HORSEPOWER



Kellogg-American



AIR COMPRESSOR PUMPS, ⅓ TO 20 HP
Engineered and precision built to give more *free air* (actual air delivered) per hp, Kellogg-American compressors assure maximum air delivery, efficiency and service life. Single or two stage, 1, 2 or 4-cylinder units available for pressures up to 200 psi; displacements to 105.9 c. f. m.

COMPLETE AIR COMPRESSORS, ⅓ TO 20 HP
Portable or stationary; skid, remote tank or tank mounted; electric motor or gas-engine-driven models permit you to select the most efficient, economical compressor for every job. Write Dept. ND-1 for Bulletin K-307.

FREE New slip-stick selector to help determine the right Kellogg-American air compressors for your needs. Send for yours on company letterhead today.

KELLOGG DIVISION
ROCHESTER 9, N. Y.

AMERICAN Brake Shoe COMPANY **Kellogg-American**

⅓-20 H P AIR COMPRESSORS · PAINT SPRAY EQUIPMENT

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NEW! HANDY!

Rust Preventive in Spray Can . . .

Here's the newest, handiest, easiest-to-use rust preventive for protection of parts in storage or between operations and for tools, dies, jigs, fixtures in the tool room.

Just press the button on the top of the can and Rust Veto Spray deposits a dry, durable, clear, waxy film that does not have to be removed before parts or tools are put into use.

Yes, it's as easy as that, and effective, too. Order a supply today and veto rust with Rust Veto Spray. Attach coupon to your purchase order.

Sold by case only

E. F. HOUGHTON & CO.
303 W. Lehigh Ave., Phila. 33, Pa.

Please send_____cases of Rust Veto Spray (1 doz. 12-oz. cans per case) at $15.24 per case f.o.b., Lancaster, Pa.

Name_____

Company_____

Address_____

City_____ Zone_____ State_____

N9-54

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DRILL PRESSES

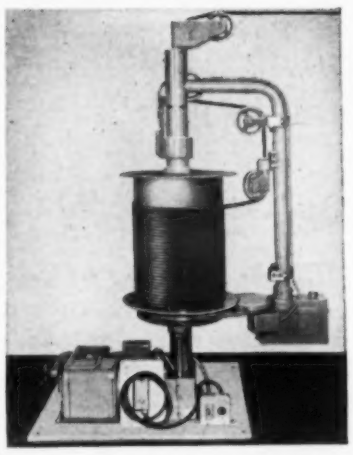
selective quill feed assures proper feeding of small and large drills

Improved line of 8-in. manual feed precision drill presses makes possible accurate drilling of small holes. Drills now have single direct-drive, governor controlled motor unit. Centrifugal governor maintains exact desired drill speed, load or no load. Vibration and noise problems have been solved by mounting chuck, armature and governor on single spindle. Selective quill feed is possible through simple engagement mechanism. Standard feed is used for No. 60 to 5/32-in. drills, while Micro-feed allows for fine or very slow feed for drills down to 0.004-in. Any speed in the two optional speed ranges of 1000 to 10,000 or 2500 to 15,000 rpm can be instantly selected. Motor operates on 110 to 125 v ac or dc, 25 to 60 cycles. Made by **Electro-Mechano Co.,** 263 E. Erie St., Milwaukee 2, Wis.

▲ For more details circle **NED-698 J4** on enclosed inquiry slip ▲

CABLE REEL

motorized, has variable speed drive



Any diameter electric cable can be wound on Connectoreel cable reel without disconnecting cable ends or using slip rings or sliding contacts. Motorized unit has variable speed drive and reversible power level wind mechanism. It is available in vertical or horizontal styles. Reel eliminates twists, kinks or knots during winding and unwinding. Metal parts are corrosion-resistance treated. Unit can be supplied without motor for operation with existing power sources in plant or on mobile equipment. Made by **Rodon, Inc.,** Neshaminy, Pa.

▲ For more details circle **NED-699 J4** on enclosed inquiry slip ▲

Selection of Welding Studs

Gregory Industries, Inc., Nelson Stud Welding Div. —Selection and ordering of welding studs are facilitated by a wall chart included in a Cost Saver Kit. Chart lists standard available-from-stock threaded studs and ceramic ferrules, special studs and equipment used. "How to Design for Nelweld" manual and stud welding catalog are also included in the kit.

▲ For more details circle **NED-700 J4** on enclosed inquiry slip ▲

YOUR ANSWER TO FLEXIBLE TUBING PROBLEMS

PENFLEX "FLEXINEERING"

THE CORRECT TUBING...PLUS TECHNICAL AID ON EVERY JOB

is the know-how of the Penflex Engineer plus the can-do of Penflex Flexible Metallic Tubing serving you from design board right up to job installation and maintenance. It is the scientific application of the right type of steel, bronze, or aluminum flexible tubing to your air, oil, water, gas, steam, volatiles, or light solids conduction requirements. It is the specific recommendation of the right size and weight flexible tubing—four-wall interlocked or seamless welded corrugated type—in sizes from ½" to 24" I.D. And it is the nation-wide supply of Penflex in any quantity where you want it, when you want it.

Get This New Data Book on the complete Penflex line of Flexible Tubing, Hose, Couplings

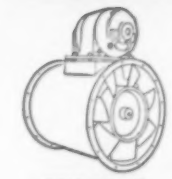
Pennsylvania Flexible Metallic Tubing Co., Inc., 7208 Powers Lane, Phila. 42, Pa.

PENFLEX

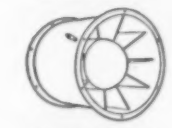
HEART OF INDUSTRY'S LIFE LINES

▲ For more details circle **NED-701 J4** on enclosed inquiry slip ▲

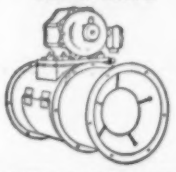
Hartzell Vaneaxial Blowers Are Built To Take It



BELT-DRIVE



DIRECT-DRIVE



HIGH TEMPERATURE

When you install a Hartzell vaneaxial blower, you can stop worrying about excessive maintenance or early replacement. You've got yourself a real rugged piece of equipment. Hartzell blowers are built for long life and trouble-free service in the most punishing industrial applications. And thousands of successful installations have proved that they've got what it takes.

Performance? The new 54" belt-drive blower will deliver 85,800 CFM against ½" static pressure (54.8 BHP) or 54,400 CFM against 7" (85.9 BHP). That's a powerful blast of air.

And with the new high temperature blower, you can move air at temperatures up to 350° or air containing acids or alkalies without fear of premature failure of belts and bearings.

For complete details, call your nearby Hartzell field representative or write for your free copy of Bulletin A-110.

HARTZELL *propeller fan co.*
Div. of Castle Hills Corp.

Dept. G. PIQUA, OHIO

ENGINEERING OFFICES IN PRINCIPAL CITIES

▲ For more details circle **NED-702 J4** on enclosed inquiry slip ▲

NOW!

BENDIX·SCINFLEX WATERPROOF PLUGS

for use with multi-conductor cables

These new Bendix*-Scinflex *waterproof* plugs are a modification of our standard AN type "E" (environment resistant) connector. They are designed to meet all "E" performance requirements when used with multi-conductor cables. Each plug includes a modified AN3057B cable clamp which provides inward radial compression on multi-conductor cables. This unique feature completely eliminates cable strain—a common source of circuit trouble.

In addition, there are gaskets at all mating surfaces and an accessory sleeve is available to accommodate an extreme range of cable sizes. A folder describing this new waterproof plug—and the various sizes in which it is manufactured—may be obtained by writing our Sales Department.

THESE BUILT-IN FEATURES ASSURE TOP PROTECTION AGAINST CIRCUIT FAILURE:

Shock and Vibration Resistant • Die Cast Aluminum Shell • Cadmium Plate—Olive Drab Finish • Moisture-Proof, Pressurized • High Arc Resistance, High Dielectric Strength Silver-Plated Contacts • Resilient Inserts

SCINTILLA DIVISION

Bendix AVIATION CORPORATION

SIDNEY, NEW YORK

Export Sales: Bendix International Division, 205 East 42nd St., New York 17, N. Y.

Factory Branch Offices: 117 E. Providencia Avenue, Burbank, California • Brouwer Building, 176 W. Wisconsin Avenue, Milwaukee, Wisconsin • Stephenson Building, 6560 Cass Avenue, Detroit 2, Michigan • 512 West Avenue, Jenkintown, Pennsylvania • 8401 Cedar Springs Rd., Dallas 19, Texas • American Building, 4 South Main Street, Dayton 2, Ohio

▲ For more details circle **NED-703 J4** on enclosed inquiry slip ▲

YOU CAN'T BEAT GARRETT for SMALL PARTS and SERVICES

Whether they are small or medium size parts to regular specifications or special sizes and finishes . . . Garrett can give you quick deliveries. Garrett's stock of billions of parts make most deliveries possible from stock. Garrett's three modern plants equipped with the most up-to-date, precision automatic machines provide the fastest service on parts to your special specifications.

SPRING LOCK WASHERS

Complete line of high quality spring lock washers to ASA and SAE specifications, plus many special types . . . wide choice of metals plated to your requirements.

FLAT WASHERS

Fast delivery from the most complete line of washers in the world. Precision made in thousands of different sizes and types—all standard and many semi-standard sizes. Ready for delivery from stock to you.

HOSE CLAMPS

Aircraft AN 737 Stainless steel radial type Multi-Clamp (QS100 & AN 748) worm type screw hose clamp. Auto-Seal, the inexpensive high quality hose clamp.

STAMPINGS

Quick deliveries on small and medium stampings made to your specifications on high-speed precision production presses. Finished, tumbled and plated to your specifications.

Write today for the Garrett catalog and technical data on these products.

Garrett OF PHILADELPHIA

MANUFACTURED BY GEORGE K. GARRETT COMPANY, INC. PHILA. 34, PA.

▲ For more details circle **NED-704 J4** on enclosed inquiry slip ▲

SCIENCE MAKES POSSIBLE FUSED EDGES

U. S. PATS: 2521984 2521985

Vacuum cleaner air filter and a sweat band, both with sealed edges.

Thermoplastic man-made fibres can be felted and fabricated into special parts for assembly or use without further processing. The felt within the edges can have any desired porosity, within wide limits. Thus these fused-edge felts have great versatility, and are capable of rendering many different services. It will pay you to look into what they can do for you. Write for information on your company letterhead.

SOME PRESENT USES

Vacuum cleaner filters
Powdered soap containers
Face powder pads
Insulation
Clothing lining
Fluid filters
(The field has barely been scratched!)

American Felt Company TRADE MARK

62 GLENVILLE RD. GLENVILLE, CONN.

▲ For more details circle **NED-705 J4** on enclosed inquiry slip ▲

What Better Product Can Loyd Scruggs Help YOU Develop?

POWER TOOL?
HEATER?
FAN OR BLOWER?

LAWN TRIMMER? Our "Custom-Built Motor Service" has helped leading manufacturers of grass trimmers *cut costs* and keep sales moving at a *fast clip!* Scruggs Motors were designed to their specs . . . and complete satisfaction.

Sample motor furnished on request. Whatever your fractional horsepower application may be, a versatile Scruggs Universal AC-DC or Shaded Pole AC Motor can be built to *your* specs. Write today for Data and Performance Chart.

You can stake your reputation on Scruggs Motors

THE Loyd Scruggs COMPANY
Festus, Mo.—A Dazey Corporation Subsidiary
MANUFACTURERS OF PRECISION INSTRUMENTS SINCE 1934

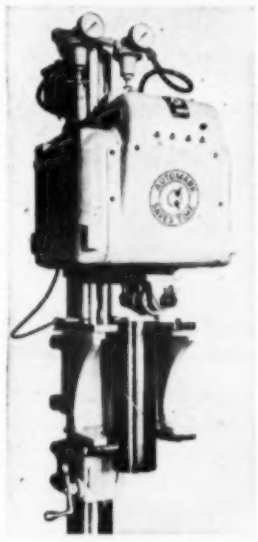
▲ For more details circle **NED-706 J4** on enclosed inquiry slip ▲

VIBRATION MONITOR prevents excess vibration damage

Used either for measuring vibration or as a protective device installed on rotating or vibrating machinery, model 1 Vibraswitch has a flat frequency response from 0 to 200 cycles per second. It serves to prevent costly damage resulting from excess vibration. It has an internal SPDT snap switch which can be wired into control circuits carrying up to 5 amp to actuate a warning or shut down the machine when vibration exceeds normal by a preselected amount. Device is capable of actuation with vibratory displacement increases of less than 100 microinches at the most sensitive setting. It does not require a power source or other auxiliary equipment. Made by **Beta Corp.,** Dept. NE, P. O. Box 8625, Richmond 26, Va.

▲ For more details circle **NED-707 J4** on enclosed inquiry slip ▲

ROLL MARKING MACHINE for round, flat, irregular surfaces



Numbers, letters or designs are indented in metallic or nonmetallic surfaces by the Automark model RMA-1 automatic roll marking machine. Up to 6000 impressions per hour can be made on round, flat or irregular surfaces. Machine is powered by air and operated by electrical remote control by hand, foot or fixture actuation. Marking head and table can be moved up, down or rotated on the column to accommodate large parts. Table can also be removed and a large fixture face mounted to the table clamp on the column. Marking stamp is applied at any desired pressure up to 7500 psi. Automatic dial and slide fixtures, chute feed fixtures and motorized hopper feeds, can be supplied for synchronization with the machine. Made by **Defiance Machine & Tool Co.,** 1928 S. Vandeventer Ave., St. Louis 10, Mo.

▲ For more details circle **NED-708 J4** on enclosed inquiry slip ▲

Wire Rope Recommendations

John A. Roebling's Sons Corp.—Simplified ordering plan and reference for wire rope users is provided by this 56-page wire-bound and tab-indexed brochure "Wire Rope Recommendations and Catalog." It is divided into 16 sections, one for each of major industries using wire rope.

▲ For more details circle **NED-709 J4** on enclosed inquiry slip ▲

Another CADDY FIRST

Molded FIBER GLASS HANDLE

The COOLEST operating lightest weight (14 Oz.) tong type holder ever made

300 AMP CADDY® CUB

FEATURING:

FIBER GLASS HANDLE—Impervious to moisture. Stronger to withstand rough usage. Ribs for firm grip and minimum hand contact area. Handle material same as insulators.

COOL OPERATION—Solid copper CADWELD. connection — no resistance heating.

LIGHT WEIGHT—14 oz suitable for *continuous* 3/16" and under electrodes—intermittent 1/4" usage

CADDY® ARC WELDING ACCESSORY DIV. ERICO PRODUCTS, INC. 2070 E. 61st PLACE • CLEVELAND 3, OHIO

WRITE TODAY FOR NEW 1955 CADDY CATALOG

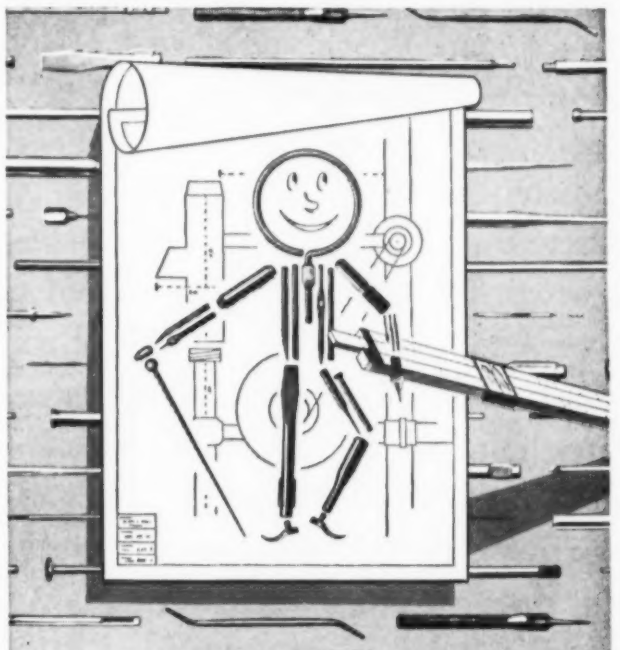
▲ For more details circle **NED-710 J4** on enclosed inquiry slip ▲

If you use bin-stored materials you can handle them better with a Simplicity Os-A-Veyor type bin feeder

If you move anything that can be stored in a bin, chances are a Simplicity Os-A-Veyor type bin feeder will cut handling costs and speed up your operations. Simplicity Bin Feeders practically eliminate bridging and stoppage because they feed from the full length of the bin—materials will flow as you need them. Simplicity bin feeders are ideal, too, for storing and moving materials that are improved by tempering. Simplified power and operating mechanism keeps maintenance costs low, makes servicing easy. Write us today for complete information.

Simplicity ENGINEERING CO., DURAND, MICH. 101

▲ For more details circle **NED-711 J4** on enclosed inquiry slip ▲



CUSTOM-MADE TO YOUR BLUEPRINTS

Need pins, pivots, mandrels, or other small parts? Need them in fine micro-finishes and tolerances in tenths . . . in special sizes and types to fit your product designs?

Torrington produces a wide variety of parts to customers' exact specifications . . . *faster, better and for less* than you can make them in your own plant. Why not let Torrington apply their many years of experience to *your* problems and have their special automatic machinery work for you?

Send for our Condensed Catalog. It shows many more of the parts we can produce economically for you. Send a sample part or blueprint for our quotation—it can save you money.

THE TORRINGTON COMPANY
Specialties Division
808 Field Street, Torrington, Conn.

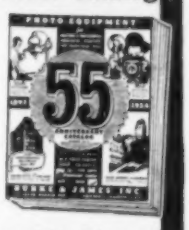
TORRINGTON SPECIAL METAL PARTS

Makers of Torrington Needle Bearings

▲ For more details circle **NED-712 J4** on enclosed inquiry slip ▲

PHOTO EQUIPMENT... Geared to INDUSTRIAL & SCIENTIFIC Uses

FREE 55th Annual Catalog



96 Pages crammed with THOUSANDS of Newest *Photo Tools, Cameras* (Press, Studio, Candid, Special Purpose, etc.), *Lenses, Projectors,* Lighting Equipment, Developing Equip., Enlargers, etc., for Amateur — Professional in daily Scientific or Industrial work.

CAMERAS—of all types! Special purpose, Photomicrography, Laboratory, NEW POLAROID LAND BACK, etc.

LENSES— World's largest stock from ⅜" to 72". — All speeds, and types, special Mounts, Lenskoting, etc.

LABORATORY EQUIPMENT — Stainless Steel Equipment, Dryers, etc.

Write *TODAY* to . . . NED.

Burke & James, Inc.

FINE PHOTOGRAPHIC EQUIPMENT SINCE 1897

321 S. Wabash Ave., Chicago 4, Illinois, U. S. A.

▲ For more details circle NED-714 J4 on enclosed inquiry slip ▲

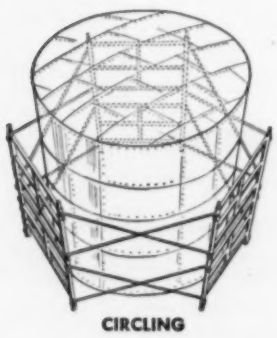
Overhead Work's *Not just 'UP'*

When you have to go *around* a job or *get inside* a curved structure, buy Universal Ezebilt—*the one scaffold* you can use on most every job. For example, Ezebilt's exclusive Gravity-Lock brace mechanism lets you "swivel" standard panels to "circle" curved surfaces, or to "rack-down" safely in narrow passages. And you don't need to fuss with nuts and bolts or loose parts — Ezebilt's rustproof Gravity-Lock helps you to put your scaffold up and take it down in much less time — handle jobs easier and faster because there are *'no bolts to master.'*

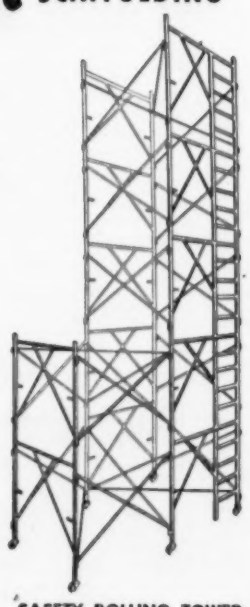
UNIVERSAL Ezebilt SCAFFOLDING

Write for New Catalog

Shows how to "custom-build" work platforms to any size or shape with standard Universal Ezebilt Scaffolding.



CIRCLING



SAFETY ROLLING TOWER

Distributors offer fast help and service. See your phone directory.

UNIVERSAL MANUFACTURING CORP.
ZELIENOPLE 6, PA.

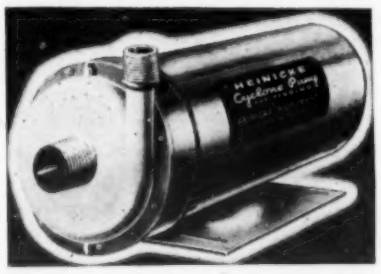
▲ For more details circle NED-715 J4 on enclosed inquiry slip ▲

HIGH SPEED PRESS
conveyor-fed multistation unit

High speed conveyor-fed press will produce up to 7200 pieces per hour with one operator. Thirty-eight stations are used. Safety-stop mechanism aligns work at each station and stops press in case of jamming or misalignment. Operator feeds material to conveyor at a safe distance from the ram. Stampings are automatically ejected at the rear of the press. Press features oversized crankshafts, Timken bearings, solid web-type flywheels, symmetrical rams and long gibs and V-ways. Dies are individually job-engineered. Made by **Federal Press Co.**, 506 Division St., Elkhart, Ind.

▲ For more details circle NED-716 J4 on enclosed inquiry slip ▲

CENTRIFUGAL PUMP
¾-hp unit delivers 4260 gph



Mirror polished type 316 stainless steel construction with correct vane and shroud dimensions and curvatures results in efficient operation of line of Cyclone centrifugal pumps. A ¾-hp model delivers 4260 gph at moderate pressures. Even at higher pressures, high volume is maintained. Pumps are nonoverloading and are equipped with self-flushing noncorrosive mechanical seals for handling liquids containing solids. They are offered in ½, ¾, 1 and 1½-hp models, in all standard voltages and cycles, single or three-phase. Pump line covers delivery range from 15 to 120 gpm at up to 100-ft head. Pumps are furnished close-coupled to G-E 3450-rpm motors. Made by **Heinicke Instruments,** Dept. HC, 2035 Harding St., Hollywood, Fla.

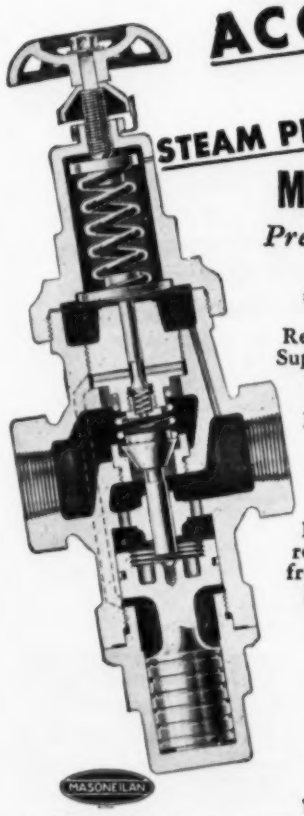
▲ For more details circle NED-717 J4 on enclosed inquiry slip ▲

Electric Fork Trucks

Clark Equipment Co.—16-page illustrated brochure "Electri-Facts" covers the salient features of this fork truck line. Tilt cylinders, brakes, drive system and control circuit are among the points covered. Bulletin, which also shows range of models available, has an illustrated section on attachments ranging from overhead guards to snow plows.

▲ For more details circle NED-718 J4 on enclosed inquiry slip ▲

TOPS FOR ACCURACY IN STEAM PRESSURE CONTROL



Masoneilan No. 11

Pressure Reducing Valve

Users tell us this is the most accurate, dependable reducing valve they've ever installed. Responds to slightest variations. Superfinished stainless steel pilot valve, housing, and main valve prevent sticking or corrosion. Easy to service — all parts may be removed with the valve in the line. Maintenance consists of *little more than keeping the moving parts clean.*

Initial pressures up to 250 lbs. reduced to any desired pressure from 10 to 90 lbs., or 75 to 225 lbs. Sizes ½" to 2" with bronze body. (Also available in iron and steel.)

Call your local Mason-Neilan Industrial Distributor for fast, dependable service.

MASON-NEILAN REGULATOR CO.
1189 Adams St., Boston 24, Mass.

▲ For more details circle NED-719 J4 on enclosed inquiry slip ▲

Commander **LEAD-MATIC** *Tapper*

Automatic Tapper with Lead Screw
FOR HIGH PRODUCTION PRECISION TAPPING

- Precision Ground Lead Screws Assure Finest Threads
- Electrically Controlled Cycle or Jog Tapping Action
- Hand, Foot or Fixture Switch Control
- Easily Adapted to Any Drill Press
- Range #0 to ¾"

Built for high production tapping . . . precision or otherwise, the Commander Lead-Matic Tapper makes any drill press a precision tapping unit, even with inexperienced operators. Electric control of Cycle or Jog tapping action provides versatility to handle any job . . . automatic tap reversal eliminates drill press motor reversing and speeds tapping. Compact, ruggedly built, easy to operate, the Commander Lead-Matic Tapper will cut your tapping costs and reduce rejects to a minimum.

Write for illustrated circular and name of nearest Distributor.

Commander MFG. CO.
4220 W. KINZIE ST. • CHICAGO
PRODUCT OF COMMANDER . . . BUILDER OF PRODUCTION TOOLS

See us at Booth 1309, National Metal Show, Chicago

▲ For more details circle NED-720 J4 on enclosed inquiry slip ▲

Boost Output with MEAD WORK FEEDERS

Feed Work Fast to Drill or Tap!

As-fast-as-you-can-step-on-a-button the sensational new Mead pneumatic WORKFEEDER delivers, holds, ejects small parts to be drilled, reamed or tapped. Accommodates stampings, castings, screw machine parts, etc. Adjustable to sizes up to 3". Foot automatic control; operator's left hand is free to keep hopper loaded. Write for new Mead AIR POWER Catalog describing "Mead Family" of air operated fixtures and devices.

MEAD SPECIALTIES COMPANY
4114 No. Knox Ave., Dept. MA-94 CHICAGO 41, ILLINOIS

▲ For more details circle NED-721 J4 on enclosed inquiry slip ▲

FREE DOWEL PIN BULLETIN

Tells How to Save Assembly Time!

DANLY

DOWEL PINS

- Accurately hardened—will not upset!
- Precision ground to limits of ±.0001"
- Two complete size ranges—standard and oversize
- Tapered lead end—easy to drive

DANLY MACHINE SPECIALTIES, INC.
2100 South Laramie Avenue
Chicago 50, Illinois

Complete Data!

Send For This Free Bulletin Today!

▲ For more details circle NED-722 J4 on enclosed inquiry slip ▲

Berkeley Systems Engineering Group Offers Experienced Help on Automation Problems

Pioneers in the development and application of high-speed counting-controlling devices, BERKELEY engineers offer a valuable combination of practical experience plus advanced technical knowledge in automatizing industrial operations.

Achievements of the group include the successful development of controls for cutting sheet and tube stock to any desired length at very high speeds, packaging by count or weight, measurement and control of frequency, flow, pressure, r.p.m., data reduction, telemetering.

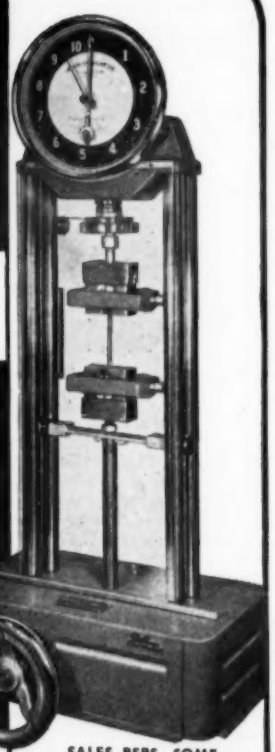
Whether your problem involves the automation of a single operation or an entire production or processing cycle, you can profit by the unique benefits of this integrated systems engineering staff. Investigate now; a letter describing your problem will bring a prompt reply outlining what we can do for you...write today. Please address department C9.

Berkeley *division* M-39
BECKMAN INSTRUMENTS INC.
2200 WRIGHT AVE., RICHMOND, CALIF.

▲ For more details circle NED-723 J4 on enclosed inquiry slip ▲

DILLON *Universal* **TESTER**

Motorized or Hand Operated



Engineering skill at its highest! COMPRESSION-TENSILE-TRANSVERSE and SHEAR testing combined in one portable instrument.

7 different gauges available—all interchangeable! Capacities from 250 up to 10,000 lbs. Dillon Universal Tester handles rounds, flats or special shapes and—for split accuracy—is calibrated with Proving Ring certified by U. S. Bureau of Standards. Has maximum hand, self-aligning grips, ball bearings. America's most popular low-priced tester! Write for illustrated brochure and FREE Tensile Strength Computer.

W.C. DILLON & CO., INC.
14620NE KESWICK STREET
VAN NUYS (Suburb of Los Angeles)
CALIFORNIA

SALES REPS. SOME TERRITORIES OPEN—WRITE.
WRITE FOR LITERATURE AND FREE TENSILE STRENGTH COMPUTER.

▲ For more details circle NED-724 J4 on enclosed inquiry slip ▲

★ A Motor for
LOW SPEED OPERATION

If you are now manufacturing a product or developing a product where you need motion at slow speed, here is the motor for you. Hundreds of thousands now in use on cooking appliances, vending, coin operated, amusement, and advertising displays.

These AC gear motors are precision built and are being manufactured in volume for immediate delivery. For further information, send the requirements of your application to us. Special motors are built to meet your new product needs. Write today for data sheet.

MOTORESEARCH COMPANY
1600 JUNCTION AVENUE
RACINE, WISCONSIN

Designers and Manufacturers of
SPECIAL INDUCTION MOTORS

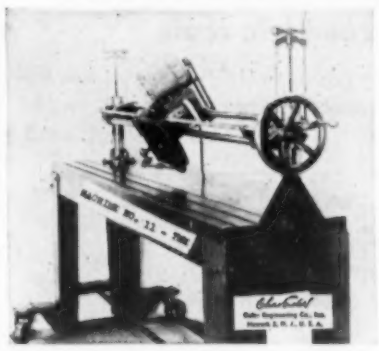
★ ▲ For more details circle NED-725 J4 on enclosed inquiry slip ▲

AIR BORE GAGES
four sizes in ½ to 8-in. range

Air jets located in the heads of A-125OP adjustable air bore gages bring about an actual mechanical contact between part and tungsten carbide gage contacts. This enables the operator to utilize a sense of touch to help guide the gage to its proper position. Lightweight, easily handled gages are made in four sizes with ½ to 1, 1 to 2, 2 to 4 and 4 to 8-in. ranges. Gages can be set with gage blocks and transferred to a round bore with no significant error. Use can be with either the 2500 to 1 magnification or 5000 to 1 magnification Federal Dimensionair indicator unit. Made by **Federal Products Corp.**, 1118NR1 Eddy St., Providence 1, R. I.

▲ For more details circle NED-726 J4 on enclosed inquiry slip ▲

ABRASIVE CUTTING MACHINE
for metals, refractories or glass



Accurate longitudinal cuts on bars, tubes and sheets of tungsten, molybdenum, ferrous metals, refractory materials and glass can be made with the No. 11-TMM abrasive cutter. Work head of the wet type machine carries a 1/16 x 12-in. cutting wheel operated at 1720 rpm by a ¼-hp motor. Travel is up to 42 in. by hand wheel and screw feed. Work head can be tilted and locked at any angle from vertical to horizontal. Table is 7½ ft long and 18 in. wide. Splash pan (not shown) fits under table to collect coolant and return it to the sump for recirculation. Abrasive cutting wheels can be any of several types. Made by **Eisler Engineering Co.**, 753 S. Thirteenth St., Newark 3, N. J.

▲ For more details circle NED-727 J4 on enclosed inquiry slip ▲

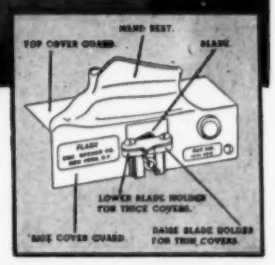
Selenium Rectifiers

Fansteel Metallurgical Corp. — 24-page bulletin 6.400 contains information useful to design engineer who uses rectifiers. Topics covered are standard cell sizes and ratings; typical rectifier circuits, formulas and constants; elementary operating principles; typical characteristics; test circuits; installation and care; and typical applications.

▲ For more details circle NED-728 J4 on enclosed inquiry slip ▲

Amazing
FLASH BOX OPENER
Opens Any Carton Quicker . . . Cleaner

Exclusive patented blade holder adjustable to varying thicknesses of carton covers.



THE ONLY CARTON OPENER THAT GIVES YOU ALL THESE ADVANTAGES:
Penetrates exactly under the outer cover thickness • Protects contents of carton • Cuts clearly to permit re-use • Prevents accidents • Saves time • Eliminates fatigue. *Already accepted by leading industries.*

Retail Price
$1.75

FLASH BOX OPENER CO., Inc.
52 W. Houston St. • New York 12, N. Y.

▲ For more details circle NED-729 J4 on enclosed inquiry slip ▲

Built for the Job
DARNELL
CASTERS & E-Z ROLL WHEELS

STRING GUARDS...
Even though string and ravelings may wind around the hub, these string guards insure easy rolling at all times.

RUST-PROOFED...
by the Udylite process, Darnell Casters give longer, care-free life wherever water, steam and corroding chemicals are freely used.

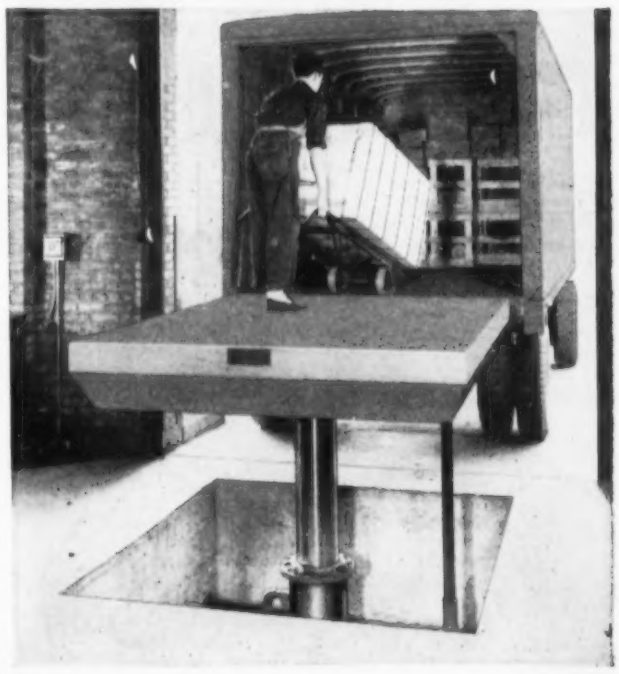
RUBBER TREADS...
a wide choice of treads suited to all types of floors, including Darnelloprene oil, water and chemical-resistant treads, make Darnell Casters and Wheels highly adapted to rough usage.

LUBRICATION...
all swivel and wheel bearings are factory packed with a high quality grease. Zerk fittings are provided for easy lubrication.

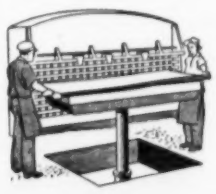
DARNELL CORPORATION, LTD.
DOWNEY (LOS ANGELES COUNTY) CALIFORNIA
60 WALKER STREET, NEW YORK 13, NEW YORK
36 NORTH CLINTON STREET, CHICAGO 6, ILLINOIS

▲ For more details circle NED-730 J4 on enclosed inquiry slip ▲

Rotary LEVELATOR® Lifts
HANDLE HEAVY LOADS FASTER AND CHEAPER



Adaptable To Many Uses—Use economical Oildraulic power to lift loads from plant floor to trucks, machines or different building levels. Rotary Levelator Lifts speed plant traffic, cut labor costs. Save plant space too . . . often eliminating need for loading docks.



Machine Feeding—Used for machine feeding, Levelator Lifts are time-savers, cost-savers. They lift loads faster and cheaper than men or makeshift methods and keep materials at the right height for continuous feeding.

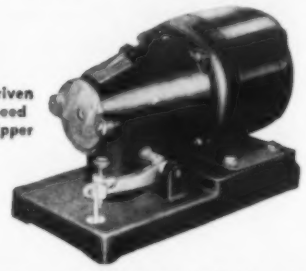
Levelator Lifts are built for specified loads up to 80,000 lbs., travel up to 6 ft., speed as desired. When lowered, platform recesses into floor and can be trucked over. Powered by economical compressed air or hydraulic power unit.

MAIL COUPON FOR CATALOG
ROTARY LIFT CO.,
1163 Kentucky, Memphis 2, Tenn.
Send complete information on Levelator Lifts to:
Name.....
Address.....
.....

Rotary **LEVELATOR® LIFTS**

▲ For more details circle NED-731 J4 on enclosed inquiry slip ▲

Over 3,000 Strips Per Hour with HIGH SPEED WIRE STRIPPERS



Motor Driven High Speed Wire Stripper

Completely removes any type of insulation (including new plastic types) from solid, strand or multi-conductor cable up to ½" diameter. Stripping lengths up to 1½". Works instantly . . . easy to use . . . simple to adjust. Three exclusive circular cutters center cable for accuracy and give more and sharper cutting edge. Comes with ¼ H.P. 110-volt single phase AC motor, cord, switch and plug. Cut production costs with HIGH SPEED.

Costs only $132.50 F.O.B. Rochester, N. Y.

Write for detailed illustrated free literature on lower cost production wire stripping.

HIGH SPEED HAMMER CO., INC.

Manufacturers of HIGH SPEED Wire Strippers, Cold Rivoters, Staking Machines and Precision Drilling Machines.

315N. NORTON ST., ROCHESTER 21, N. Y.

▲ For more details circle NED-732 J4 on enclosed inquiry slip ▲

For Tops in Pipe Wrench Performance... it's the Genuine RIDGID

...with the guaranteed trouble-free housing!

Only the RIDGID has a world-wide rep as the finest pipe wrench made. Only RIDGID has earned and maintains this rep by building toughness and smart performance into these overwhelmingly popular wrenches, checking them part by part and *hard work testing every last one* before shipment. When you buy a RIDGID, you know the housing won't break, the jaws won't slip or lock, the adjusting nut spins easily to all sizes, 6" to 60". Always most for your money—ask your Supply House.

Have you tried the new RIDGID Spud Wrench?

Deep narrow jaws for close work—break-proof housing—famous RIDGID jaw suspension—comfort-grip I-beam handle. Ask your Supply House.

THE RIDGE TOOL COMPANY, ELYRIA, OHIO, U.S.A.

RIDGID Work-Saver Pipe Tools

▲ For more details circle NED-733 J4 on enclosed inquiry slip ▲

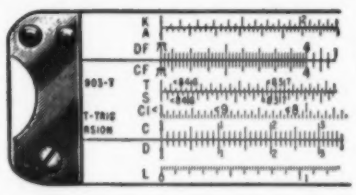
LABEL MARKER handles up to 144 labels per minute

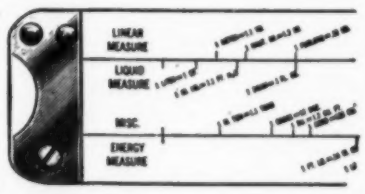
Labels ranging in size from 1¼ x 1¼ to 3 x 1⅞-in. can be marked, counted, cut and stacked from plain rolls by model 22 label marker at speeds up to 144 per minute. Typical information imprinted by automatic machine includes price, part number, size, quantity, or weight. Machine is available with hand-set register for quick-changing numbers without resetting type, or with automatic wheel for consecutive or duplicate numbering. This makes it possible to keep other information on labels constant while changing certain numbers. Machine stops when preset number of labels is printed. Equipment includes type chase and complete type assortment, ink, oil and flexible-arm lamp. Made by **Soabar Co.**, Dept. N, 5815 Erdrick St., Philadelphia 24, Pa.

▲ For more details circle NED-734 J4 on enclosed inquiry slip ▲

CONVERSION SLIDE RULE has 64 factors and trig scale

By positioning a conversion mark opposite an index mark on this single-setting conversion slide rule, any conversion is automatically set and read on the C, D, DF or DF scales without moving slider or further computation. Rule has 64 linear, liquid, energy and miscellaneous factors on one side and a complete trig scale arrangement on the reverse side consisting of A, K, DF-CF, T, S, CI, C-D and L scales. Model 903-T conversion rule is made of light weatherproof metal alloy, is 12⅛ x 1¼ x 3/32-in. and weighs 2¾ oz. Made by **Pickett & Eckel, Inc.**, 1109D S. Fremont Ave., Alhambra, Calif.





▲ For more details circle NED-735 J4 on enclosed inquiry slip ▲

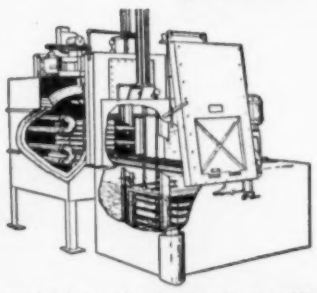
Ball Bearings

Marlin-Rockwell Corp.—Dimensions for series of M-R-C power transmission ball bearings for line shafting, pillow blocks, flange units, pumps shafts and other applications are found in illustrated form 1542 of 16 pages. Interchangeable sizes for other makes of bearings are also included.

▲ For more details circle NED-736 J4 on enclosed inquiry slip ▲

CONTROLLED ATMOSPHERE BATCH FURNACE

makes high production, versatile heat treating practical, economical



You get high production and versatility for controlled atmosphere heat treating, with low capital investment, low operating costs when you specify Surface Combustion's Allcase Furnace. The Allcase is a batch type, radiant tube heated furnace with recirculating fan and enclosed quench.

Operating temperature range: 1400F to 1750F.

Standard size has a heating rate 568 to 1030 lbs/hr.

Processes: gas carburizing, clean hardening, carbonitriding or dry cyaniding, carbon restoration, homogeneous carburizing, and clean annealing.

In many cases, one man handles a whole battery of Allcase furnaces. Work-handling equipment saves operator time, speeds production, increases precision.

SURFACE COMBUSTION CORP., TOLEDO 1, OHIO

Write for Bulletin SC-163.

▲ For more details circle NED-737 J4 on enclosed inquiry slip ▲

LEASE-A-TOWMOTOR

GET LOWER HANDLING COST . . . WITHOUT CAPITAL INVESTMENT

"Lease-A-Towmotor" Plan requires no capital investment and only a small monthly rental payment. Advantages include—

(a) *Low monthly rental during lease contract period. No down payment.*

(b) *Your business will enjoy the competitive advantages of lower costs through greater handling efficiency.*

Choice of a 3 or 5-year lease. Monthly payments are graduated downward over 3-year period and are proportionately lower over 5-year period.

TOWMOTOR Time Payment Plan. You can also buy your Towmotor equipment on 6 to-36-month terms. No outside financing. Minimum down payment. Towmotor handles all details.

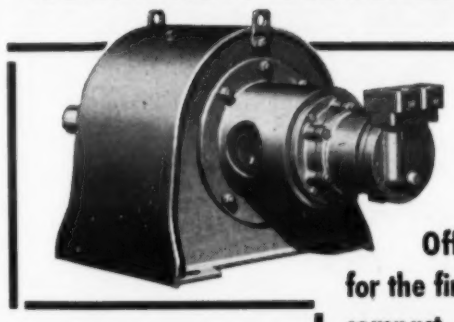
Write **TOWMOTOR CORPORATION**, Div. 2509, 1226 E. 152nd St., Cleveland 10, Ohio.

TOWMOTOR THE ONE-MAN-GANG ® **FORK LIFT TRUCKS and TRACTORS** SINCE 1919

TOWMOTOR ENGINEERED FOR QUALITY PERFORMANCE

▲ For more details circle NED-738 J4 on enclosed inquiry slip ▲

NOW! NEW OILGEARDUCERS

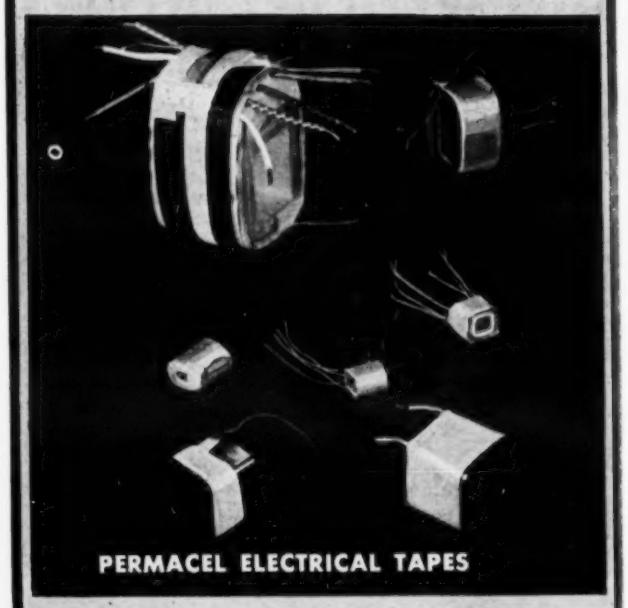


Offering for the first time compact, packaged, fluid power output drive units!

Oilgearducers are new integral output drive units combining Oilgear Fluid Power axial piston motors and Falk All-Steel Reducers. There are horizontal and vertical models, concentric and right angle types and single, double, triple and quadruple reduction. Now, for the first time you can get a complete, easy to install, "ANY-SPEED" output unit for your high torque, low maximum speed drives. When used in combination with Oilgear Fluid Power Pumps, these reversible Oilgearducers provide infinite variability of speed, absolutely controlled rate of acceleration and deceleration, smooth, swift reversal, cushioned braking. All these together with major economies in motor, circuitry and power requirements. This new Oilgearducer "Any-Speed" output unit is available in sizes from 1 to 20 h.p. It is unequalled for applications as diverse as can-filling, paper machines, centrifugals, cable wrappers . . . and in automation or feed back applications where synchronization is an absolute necessity. Write now for new bulletin 56610. THE OILGEAR COMPANY, 1582 W. Pierce St., Milwaukee 4, Wis.

▲ For more details circle NED-739 J4 on enclosed inquiry slip ▲

For Insulating TV Parts



PERMACEL® TAPES

Many jobs can be done faster, better, easier with self-sticking tape . . . write Permacel Tape Corporation, New Brunswick, N. J.

▲ For more details circle NED-740 J4 on enclosed inquiry slip ▲

How can YOU use Aero-Seal HOSE CLAMPS?

• AERO-SEALS – the finest hose clamps made, were designed for aviation and automotive use. Precision worm gear drive tightens evenly without damaging hose or material, stays locked with a never-let-go grip. Stainless steel bands resist corrosion. Application and removal takes mere seconds. Re-usable over and over.

Design engineers, production and maintenance men find AERO-SEALS perfect for many special uses. Your product or plant can use them, too. Available in the widest possible range of sizes. Write for details.

Aero-Seal PRECISION WORM DRIVE HOSE CLAMPS

ANOTHER BREEZE MARK PRODUCT

BREEZE CORPORATIONS, INC. 700 Liberty Ave., Union, N. J.

For more details circle NED-741 J4 on enclosed inquiry slip

YOU CAN BE SURE.. IF IT'S Westinghouse

FREE to D-C motor users

HERE ARE TWENTY PAGES OF FACTS ON THE LIFE-LINE SK D-C MOTOR. THIS BOOK SHOWS WHY AND HOW NEW DEPENDABILITY HAS BEEN ADDED TO THE WELL-KNOWN SK... INCLUDES INFORMATION ON CONSTRUCTION, MOUNTING, TYPES OF ENCLOSURES, PERMISSIBLE MOTORS.

GET YOUR COPY FREE! Simply mail a penny post card asking for a copy of Life-Line SK D-C Motor Booklet, B-4595. Address: Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Pa.

J-21567

Westinghouse Life-Line D-C Motors

For more details circle NED-742 J4 on enclosed inquiry slip

STEAM GENERATOR

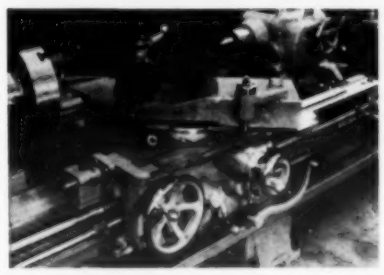
2¼ hp portable or stationary unit

Steam pressure of 100 psi at 320° F can be obtained in 5 minutes with the HFD 24 Electro-Steam generator. Suitable for use as steam supply or cleaner where central steam supply is unavailable or is shut down during the off-heating season, the unit develops 2¼ hp. Valve adjustments enable generator to deliver live steam, hot water, steam and detergent solution, steam and hot water detergent solution, or cold water rinse. It is furnished as either a stationary or portable unit with wheels and requires only water and electrical connections to operate. Additional equipment includes detergent tank, steam and detergent hoses and steam nozzle gun with insulated handle. Various safety controls are incorporated. Made by **Columbia Industries, Inc.**, Electro-Steam Div., Columbia, Pa.

For more details circle NED-743 J4 on enclosed inquiry slip

HYDRAULIC TRACER

converts lathes for contouring work



Initial installation of the Trace-O-Matic hydraulic tracer attachment on Axelson general purpose heavy duty lathes requires only a few hours and reversion to a standard lathe takes 15 minutes. Contouring unit does not restrict swing or capacity. Parts are duplicated from easily installed flat, inexpensive templates. All classes of work with uninterrupted cuts are handled automatically, including square or tapered shoulder, flanges, radii, tapers, grinding necks, form turning, step shafts and contour facing. Tungsten carbide tools of single point type are preferred. Any desired taper or length of taper within the machine capacity can be cut. Made by **Axelson Mfg. Co.**, 6160 S. Boyle Ave., Los Angeles 58, Calif.

For more details circle NED-744 J4 on enclosed inquiry slip

Welding Positioners

Harnischfeger Corp., Welding Div.—Important features and condensed specifications for four models of P & H welding positioners with capacities up to 35,000 lb are presented in illustrated bulletin. Included is an efficiency graph based on typical welding jobs and a section on attachments for special jobs.

For more details circle NED-745 J4 on enclosed inquiry slip

FAMOUS "CHEM-BOARD"* CONVOY TOTE BOXES

*Chemically Hardened Corrugated Board

SOLD THROUGH LOCAL INDUSTRIAL DISTRIBUTORS

Cost—weigh—50% to 60% less than steel. A wide range of sizes in standard and custom made NESTING, STACKING, VERTICAL TOTE BOXES. Write for complete information, prices, name of distributor in your area.

CONVOY RECORD STORAGE FILES

Sold Only by YOUR LOCAL STATIONER

Used by most famous names in industry and businesses of all kinds. CONVOY "CHEM-BOARD" files for record storage made in letter, legal, and 12 other sizes. Stack to ceiling, mate together. Call your local stationer or write for name of stationer nearest to serve you.

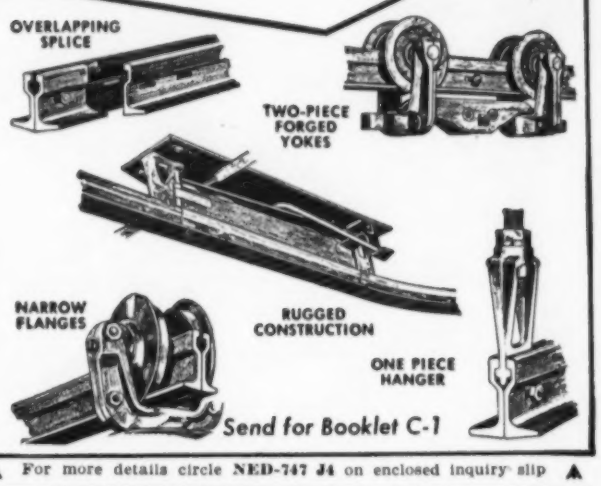
CONVOY, INC.
Canton 6, Ohio
P. O. Station B, Box 216-N

For more details circle NED-746 J4 on enclosed inquiry slip

MONORAIL SYSTEMS FABRICATED TO FIT

American MonoRail is fabricated to fit any handling job. Systems are available for hand or electric operation, including rubber wheel drive with local or remote control providing many automatic features.

AMERICAN MONORAIL CO.
13116 Athens Ave. • Cleveland 7, Ohio

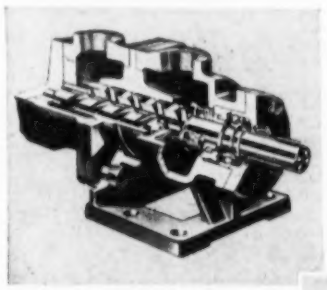


Send for Booklet C-1

For more details circle NED-747 J4 on enclosed inquiry slip

DE LAVAL

manufactures wide range line of IMO Pumps and Worm Gearing



Unique De Laval IMO Pumps are quiet, pulsation-free, compact and designed for direct-connecting high speed operation. Send for Bulletin LG-B showing wide range IMO line.

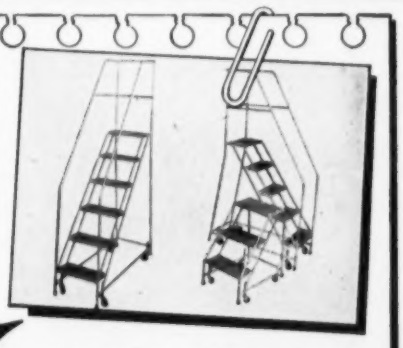
De Laval Worm Gear Sets are available in 3:1 to 100:1 ratios, fractional .1 to 550 horsepower and 3" to 36" center distances. Send for comprehensive Catalog 5000.

DE LAVAL STEAM TURBINE COMPANY
808 Nottingham Way, Trenton 2, New Jersey

DL351A

For more details circle NED-748 J4 on enclosed inquiry slip

good idea!



A SAFETY STEP LADDER THAT GLIDES ON CASTERS until you step on it! The new ROLL-EZY rolls smoothly along until the operator starts up the steps. Then his weight compresses springs in the caster mounts, forcing four rubber tipped legs to rest securely on the floor. Other super-safety features include a tip-proof base, Globe Safety Grip Strut Treads and hand rails that enclose both sides of the steps, extending 32" above and around the top step on all higher models. One to eight-step units. See ARROW specialist or write.

Full facts on all ARROW power and gravity conveyors. Write to:

arrow PRODUCTS, INC.
109 Arrow Bldg. 417 Front, N.W. Grand Rapids, Mich.

For more details circle NED-749 J4 on enclosed inquiry slip

Hardness Readings in 2 seconds!

Webster

PORTABLE

Hardness Testers

FOR NON-FERROUS METALS

TWO LOW-COST MODELS differing in sensitivity for rapidly testing hardness of aluminum, brass, copper, etc. No training required; one hand operation. Hardness readings in 2 seconds anywhere in shop. Can be correlated to standard hardness scales. Quick reading dial. Special anvil design tests all shapes: sheets, extrusions, tubing, strip stock. Capacity ¼". Simple, rugged design, easy maintenance.

MODEL B Direct hardness readings on all aluminum alloys.

MODEL B-75 Direct hardness readings on copper, brass, etc.

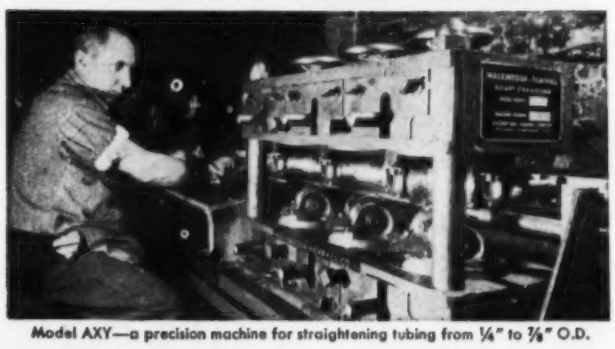
Other models available

WEBSTER INSTRUMENT INC. DEPT. N, 11856 Mississippi Ave. Los Angeles 25, California.

▲ For more details circle NED-750 J4 on enclosed inquiry slip ▲

If you want tubing STRAIGHT AS AN ARROW

you have a job for a MACK-HEMP *guideless* ROTARY STRAIGHTENER



Model AXY—a precision machine for straightening tubing from ¼" to ⅞" O.D.

Constantly, more and more manufacturers of varied products which include pipe and tubing (ferrous and non-ferrous) are placing Mack-Hemp guideless Rotary Straighteners in their production lines with substantial advantage. These machines are available in 12 sizes to handle the tiniest tubing (1/16" O.D.) to large pipe up to 15" O.D., meeting straightness and roundness specifications of unusually close tolerances.

Why not investigate what these Mack-Hemp guideless Rotary Straighteners are accomplishing for others—evidenced by many case histories in our files? They can probably solve your problem also! Send the coupon below for Bulletins No. 52 and S-7265.

Model AX—used for straightening pipe ¼" to 1¼" O.D.

MACKINTOSH HEMPHILL CO.

Machinery Department, Ninth & Bingham Streets, Pittsburgh 3, Pa.

Makers of the Rolls with the Striped Red Wabblers

☐ Please send me Bulletins No. 52 and S-7265 giving case histories and detailed information about MACK-HEMP guideless Rotary Straighteners.

I am interested in straightening: _____ Type & Size of tubing

Name _____ Title _____

Company _____

Address _____

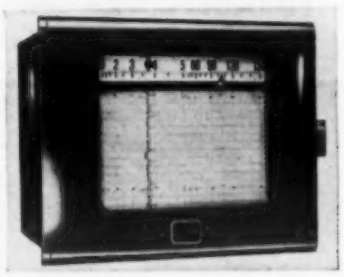
▲ For more details circle NED-751 J4 on enclosed inquiry slip ▲

ONE-CYLINDER GAS ENGINE
self-contained unit rated 9-18 bhp

Self-contained one-cylinder gas engine for oil field service or small power applications where natural gas is available is rated at 9 to 18 bhp within operating speed range of 800 to 1800 rpm. The heavy duty, vertical, spark ignition four-cycle engine has 4½-in. bore and 5¼-in. stroke. It has clutch power takeoff and will produce up to 10 kw as a packaged generator set. Engine is designed to start and operate efficiently on gasoline as well as natural gas. Fuel is regulated according to engine load requirements by governor gear-driven from crankshaft. Made by **Nordberg Mfg. Co.** 3073A S. Chase Ave., Milwaukee 7, Wis.

▲ For more details circle NED-752 J4 on enclosed inquiry slip ▲

ELECTRONIC RECORDER
measures current and voltage



Current and voltage values are measured and recorded simultaneously on one chart by Dynamaster electronic potentiometer. Instrument has fast response time coupled with accuracy within 1 per cent and sensitivity of 1/20 of 1 per cent. Two-zone chart can be driven at speeds from ¾-in. per hour to 4 ips through easily changed gears. Pen speeds can be as fast as 1½ seconds for full scale travel. High torque output permits auxiliary functions such as high-alarm contacts or retransmitting slidewires to be added to the instrument without affecting its primary function. Instrument also provides a basic voltage telemetering system which can transmit for a considerable distance without additional equipment. Made by **Bristol Co.**, 30 Bristol Rd., Waterbury 20, Conn.

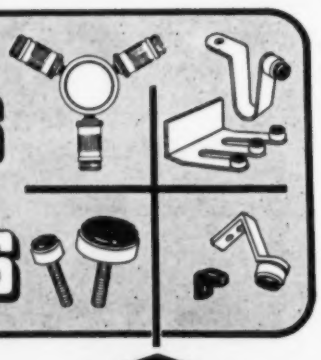
▲ For more details circle NED-753 J4 on enclosed inquiry slip ▲

Steam & Liquid Control Equipment

O. C. Keckley Co.—56-page catalog 54 which commemorates company's 40th anniversary is descriptive of line of steam and liquid control equipment. Tables cover specifications, pressures and temperatures, water heads and equivalent pressures and flange data. Products shown are pressure and temperature regulators, float valves, strainers, pop safety valves, relief valves, diaphragm valves, motor operated valves and solenoid valves.

▲ For more details circle NED-754 J4 on enclosed inquiry slip ▲

SILVER GRAPHALLOY **BRUSHES** AND **CONTACTS**



...for applications requiring low electrical noise, low and constant contact drop, high current density and minimum wear.

GRAPHALLOY

EXTENSIVELY USED IN

SELSYNS • ROTATING THERMOCOUPLE and STRAIN-GAGE CIRCUITS • ROTATING JOINTS GUN-FIRE CONTROLS • DYNAMOTORS etc.

Wide range of grades available for standard and special applications.

Brush holders and coin silver slip rings available for use with Silver Graphalloy Brushes.

Write us for Data Sheets and further information. Outline your problem and we will apply our "40 years' experience" toward its solution.

OTHER GRAPHALLOY PRODUCTS:

Oil-free, self-lubricating Bushings and Bearings (applicable −100° to +300° F.; with expansion coefficient half that of steel will not seize shaft at low temperature); oil-free Piston Rings, Seal Rings, Thrust and Friction Washers, Pump Vanes.

GRAPHITE METALLIZING CORPORATION
1030 NEPPERHAN AVENUE • YONKERS, NEW YORK

▲ For more details circle NED-755 J4 on enclosed inquiry slip ▲

AMEs

Long or Short — Curved or Straight

CALIPER GAUGES—Custom-built to fit your exact need. Whether it's measuring the inside dimensions of a pipe, the wall thickness of a casting, the outside dimensions of a rocket—Ames can build the caliper gauge that fills your requirements.

Ames caliper gauges are made of carefully-finished heavy gauge steel and are equipped with an Ames exclusive: a chordal error correcting cam that assures accurate readings. Ames calipers are available with contacts of various shapes—ball, flat or pointed—made of carbide, hardened steel, or sapphire.

Write for your free copy of Ames catalog

Your measuring problems may involve a caliper gauge. If so, send it to Ames—for a quick, profitable solution.

Representatives in principal cities. **B. C. AMES CO.** *34 Ames Street Waltham 54, Mass.*
Mfgr. of Micrometer Dial Gauges • Micrometer Dial Indicators

▲ For more details circle NED-756 J4 on enclosed inquiry slip ▲

Mathews Belt Conveyers Are Handling The Products of Many Industries

ELLWOOD CITY, PA.—Industries everywhere are finding a solution to their package handling problems in Mathews Belt Conveyers. Belt conveyers lend themselves readily to assembling, inspecting and packing. They can operate from floor to floor or between buildings. They can be set at floor level, immediately below the ceiling or at any level in between ceiling and floor. Call your Mathews representative or write for complete information to MATHEWS CONVEYER COMPANY, Ellwood City, Pa.

Whatever your product—it must be handled efficiently—you can depend on

MATHEWS CONVEYERS

▲ For more details circle NED-757 J4 on enclosed inquiry slip ▲

UP AND OUT OF THE WAY... FAST

Truscon Industrial Steel Doors are fast moving, easy to operate, mechanically or by hand. Wide clear openings speed materials movement. Variety includes straight slide, accordion, vertical lift, turnover, lift-swing, canopy, and crane doors. Sizes for every use. Weathertight. Able to withstand severe windloads. Write for illustrated catalog.

TRUSCON

TRUSCON STEEL DIVISION
REPUBLIC STEEL

1096 ALBERT STREET • YOUNGSTOWN 1, OHIO
EXPORT DEPT.: CHRYSLER BLDG., NEW YORK 17, N.Y.

A NAME YOU CAN BUILD ON

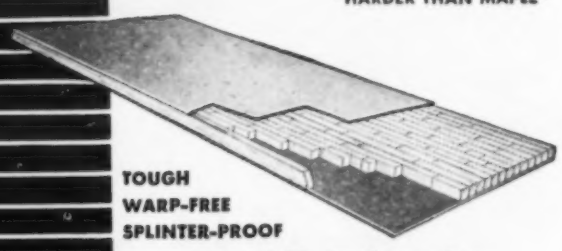
▲ For more details circle NED-758 J4 on enclosed inquiry slip ▲

NEW

WORKBENCH TOP ... Resinwood

Shop Top 30%

"HARDER THAN MAPLE"



TOUGH
WARP-FREE
SPLINTER-PROOF

For All Industries

ShopTop quality is superior to maple — with up to 50% greater economy. Select kiln-dried cores, bonded under pressure and heat, provide a built-in impact cushion to give longer life. Smooth Resinwood facings resist acid, alkali, oil, and grease. For new or replacement work benches.

Made in any size to meet your requirements.

Available through selected industrial distributors in principal cities or write direct for sample and price list.

RIMCO — ROCK ISLAND MILLWORK COMPANY
RESINWOOD DIVISION
Established 1868 Rock Island 4, Illinois

For more details circle NED-759 J4 on enclosed inquiry slip

CIRCUIT BREAKER
protects motors, other equipment

Permanent type circuit protective device fits branch circuits of corresponding 4, 4½, 5, 5½, 6 and 7½-amp ratings for secondary protection of motors and other electrical equipment. Mini-Breaker Motor Protector trips instantly on shorts, but has built-in time lag to handle starting loads and line surges. Service can be restored within 10 seconds after an interruption by pressing the shockproof reset button. Circuit will not open, however, unless the overload condition has been remedied. Any attempt to reset against overload or short only increases the speed of tripping. Made by **Mechanical Products, Inc.,** 1824 River St. at Porter, Jackson, Mich.

For more details circle NED-761 J4 on enclosed inquiry slip

INSPECTION KIT
reveals cracks in magnetic parts

Preventive maintenance inspection, and limited volume inspection of any magnetic part for surface cracks can be performed with the Y-5 yoke kit. The yoke, itself a magnetizing and testing instrument, Magnaflux powder, powder bulbs and operating instructions comprise the kit. Yoke has 100-ft cord and draws only 6 amp from any 110-v ac line. Inspection is performed by one man who can handle yoke, power control and positioning, with one hand, and dust on powder with the other. Area covered by each application of yoke varies up to 24 sq in. Made by **Magnaflux Corp.,** 7316 W. Lawrence Ave., Chicago 31, Ill.

For more details circle NED-762 J4 on enclosed inquiry slip

Job Evaluation Methods

References to all current accepted methods and techniques for determining a fair day's pay for a fair day's work are found in the second edition of "Job Evaluation Methods," a 528-page, 181-illustration book by C. W. Lytle, professor of industrial engineering, New York University. It shows how to build up a job evaluation plan from necessary elements and how to meet the requirements of an individual company. Choosing of basic job characteristics and breaking them down into subcharacteristics are covered. Book is available for $7.50 from Ronald Press Co., 15 E. 26th St., New York 10, N. Y.

For more details circle NED-763 J4 on enclosed inquiry slip

use Hanna Valves for exacting CONTROL

Hydraulic and pneumatic cylinder performance is dependent on the efficiency of the control valves used. That's why it pays to use Valves made by a leader in cylinder manufacture. For more than fifty years, the Hanna name has been synonymous with quality. With Hanna Valves, you have a selection to meet every cylinder operating need, plus the advantages of Hanna engineering services. Get your local Hanna Representative's name from your classified telephone directory or write for complete Valve data.

Hanna Engineering Works
HYDRAULIC AND PNEUMATIC EQUIPMENT . . . CYLINDERS . . . VALVES . . . DIVERTERS
1759 ELSTON AVENUE • CHICAGO 22, ILLINOIS

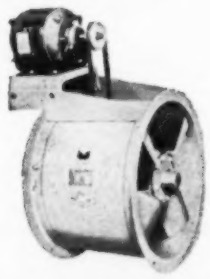
For more details circle NED-765 J4 on enclosed inquiry slip

GET THE FACTS...

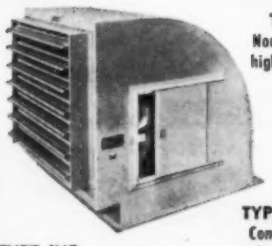
. . . and forget the problems! Without obligation, a Chelsea ventilating engineer will survey your plant—tell you *exactly* what type and size fan should be installed in every problem location.

You'll get all the facts you need for a decision!

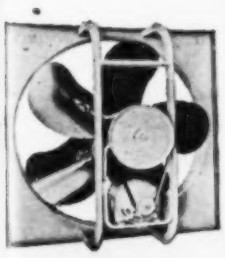
CHELSEA FANS...



TYPE PLDX
Non-overloading for high static pressures



TYPE PH
Complete penthouse unit.



TYPE IND
For normal ventilation.

The fans shown above are only a few of the many Chelsea models—each in a variety of sizes and capacities . . . Your request will bring a complete detailed catalog plus the name of your local Chelsea industrial distributor.

Every Chelsea fan has "Certified Ratings". You can depend upon accurate, carefully calculated air deliveries exactly as advertised.

CHELSEA FAN & BLOWER CO., INC.
PLAINFIELD, NEW JERSEY
MANUFACTURERS OF INDUSTRIAL VENTILATING EQUIPMENT

For more details circle NED-760 J4 on enclosed inquiry slip

NOELTING Faultless ENGINEERED TRUCK CASTERS CUT HANDLING COSTS

NEW!
MEDIUM DUTY INDUSTRIAL CASTER
Cuts Handling Time —Saves Man-Hours

900 Series Double Ball Bearing Swivel Plate Caster with Vulcanized Rubber Tread Wheel

The 900 Series, all purpose, Truck Caster has heavy pressed steel horn and top plate, corrugated for extra strength. Swivels easily on *two* full rows of hardened balls rolling around *two* separate raceways. Choice of six kinds or wheels to suit load (*175 lb. to 550 lb.*) and floor surface conditions.

All the engineering "know-how" from *over half a century of specialized experience* is yours in Faultless Industrial Casters—to speed production lines, trucks, portable equipment . . . with *less time, noise, effort.* Ask for Cat. 157, no obligation.

FAULTLESS CASTER CORPORATION
Dept.NE-11, Evansville 7, Indiana
Branches in Principal Cities—Canada Factory: Stratford, Ont.

For more details circle NED-764 J4 on enclosed inquiry slip

NAME THE CLEANING JOB

. . . you'll save every time with a WHEELABRATOR®

Wheelabrator . . . the modern centrifugal method of airless abrasive blast cleaning slashes costs and cleaning time. Conserves power, labor, space. Its cleaning perfection results in longer tool life, faster machining and inspection.

Thousands are in use for cleaning castings, forgings, heat treated parts, stampings, weldments; plastic deflashing; cleaning used auto parts, drums, pipe, valves, floor scrubbers; descaling steel strip, sheet, plate, etc.

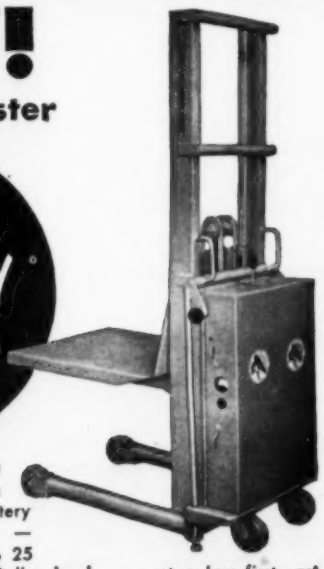
26 standard sizes and models plus numerous Special Designs available for every cleaning need. Write for Catalog 74-B.

American WHEELABRATOR & EQUIPMENT CORP. | 508 S. Byrkit St., Mishawaka, Indiana

For more details circle NED-766 J4 on enclosed inquiry slip

NEW!
L-S Handy Hoister

Battery Powered . . . for faster lifts at lower cost



Lewis-Shepard's newest Master Line Materials Handling Truck — the Battery Powered Handy Hoister — provides lift speeds up to 25 feet per minute with 1000 lbs. loads . . . at a low first cost. Perfect for stacking dies, jigs and fixtures, drums, etc., where cost of an expensive power truck is not justified. Storage battery has built-in charger . . . can be recharged from any lighting circuit. Other features include 58" lift height. Single control lever for lifting and lowering. Available in either platform or straddle-type fork lift models.

WRITE TODAY FOR FULL INFORMATION

LEWIS-SHEPARD
932-9 WALNUT ST., WATERTOWN 72, MASS.
The "MASTER" Line

For more details circle NED-767 J4 on enclosed inquiry slip

This NEW 20 amp Switch has Levolier® dependability

Levolier®
MODEL 2020

20A 125V—10A 250V
to control 2500 watts
safely on heaters, motors, high
bay lighting, fluorescent banks, etc.
AC and DC rating. Single pole multiple
break mechanism. Molded phenolic case
only 1 1/4" thick. Underwriters Laboratories Inspected.

Send for
McGill
Catalog
No. 49-A

McGILL® electrical specialties

McGILL MANUFACTURING CO., INC. 151 N. CAMPBELL ST. VALPARAISO, INDIANA

For more details circle NED-768 J4 on enclosed inquiry slip

PRECISE
ABSOLUTE PRESSURE

From 100 Microns Up

TYPE FA-160

...Ranges: 0.1–20 mm thru 800 mm Hg absolute in six ranges.
...Accuracy: 1 part in 300 over full scale.
...Sensitivity: 1 part in 500 in *all* ranges.
...Available with 2¾" or 6" dia. dial.

Write for Publication No. TP-28-A A-105

WALLACE & TIERNAN
INCORPORATED
PRECISION INSTRUMENTS AND ELECTRICAL MECHANISMS
25 MAIN ST. BELLEVILLE 9, N. J.
In Canada: Wallace & Tiernan, Ltd., Toronto

For more details circle NED-769 J4 on enclosed inquiry slip

How to check
precision gears
quickly, conclusively,
to closest tolerances

With the Kodak Conju-Gage Gear Checker, you pass every right gear, reject every wrong gear—check tooth-to-tooth composite error of .0002".

The revolutionary Kodak Conju-Gage Worm Section, used with both spur and helical gears, provides a new standard of gage precision, combines accuracy with economy. Results are recorded automatically for permanent reference.

Write for a copy of the booklet, "Kodak Conju-Gage Gear Testing Principle," which shows how Conju-Gage Instrumentation can help solve your precision gear problems.

Special Products Sales Division
EASTMAN KODAK COMPANY
Rochester 4, N. Y.

Kodak CONJU-GAGE INSTRUMENTATION

For more details circle NED-770 J4 on enclosed inquiry slip

SECTIONAL STACKING BINS
designed to hold small parts

Top three tiers of illustrated Stackbin assembly are 0 section units, each with eight individual bins for the storing of very small parts. Use can be with other sectional units of larger size with from two to eight sections. They can be set up or rearranged in a few minutes without tools for storing parts or tools of virtually any size. Made by **Stackbin Corp.**, 1081 Main St., Pawtucket, R. I.

For more details circle NED-771 J4 on enclosed inquiry slip

HYDRAULIC PRESS
for either forcing or straightening

Suitable for both toolroom and production work, combination hydraulic straightening and forcing press is available in models ranging from 5 to 150 tons capacity. Quickly interchangeable tables are located and held by four bolts. Other design features are interchangeable hydraulic valve system, O-ring gasket-mounted valves and swing-out motor and pump panel for easy servicing. Oil level gage and pressure dial are standard instruments. Control systems include hand lever or pressure manual types, and electric push button, foot pedal or automatic cycling arrangements. Special fixtures and accessories are available built to requirements. Made by **Stanley H. Holmes Co.**, Dept. C-9, 3300 W. Lake St., Chicago 24, Ill.

For more details circle NED-772 J4 on enclosed inquiry slip

Diverse Production Facilities

Electro-Mechanical Products Co.—Diversified contract manufacturing facilities at this company's plant in the Detroit area are outlined in large multi-fold bulletin. Plant can produce distribution panels, explosionproof controls, electrical assemblies, rotating equipment, machined parts, stampings, wiring harnesses, hydraulic systems and electronic test instruments.

For more details circle NED-773 J4 on enclosed inquiry slip

INDUSTRIAL STACKED
RETAINING RINGS

SAVE TIME LABOR DOLLARS

Eliminate costly waste motions and time spent untangling and applying unstacked retaining rings. Industrial Stacked Open-Type Retaining Rings are dispensed and applied in one continuous motion. Guaranteed performance saves time, rings and tempers. Tool and base free with initial order. *Write today for illustrated literature.*

INDUSTRIAL
RETAINING RING COMPANY

Originators of Modern Dispensing

8 WEST [illegible] AVENUE
MOUNT [illegible], NEW YORK

For more details circle NED-774 J4 on enclosed inquiry slip

MERRILL MATERIALS HANDLING DEVICES

3-M-2

MERRILL BROTHERS
56-13 ARNOLD AVENUE MASPETH, N. Y.

For more details circle NED-775 J4 on enclosed inquiry slip

TORIT
DUST COLLECTORS

collecting dust is just a whirl for this cyclone type TORIT DUST COLLECTOR

TORIT GIVES
Easy installation
Efficiency
Minimum piping
Low operating cost
Easy cleaning
Long service life
Small floor space
Adaptability
10 basic models

Here a Torit 19-FB Dust Collector and Torit Wheel Hoods effectively solve the dust problem for a large double-end polishing lathe. No lint or polishing dusts escape to endanger working conditions.

Up to 95% of the dusts spin into the pull-out drawer in the base of this Torit Dust Collector and the remainder is trapped in the after-filter bag.

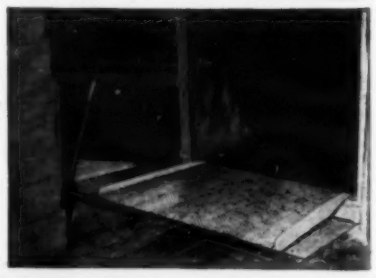
Torit Dust Collectors are turning in top performances in every type of industry. They will star for you. Write for information.

see our catalog in MACHINE TOOL CATALOGS

TORIT MANUFACTURING COMPANY
298 WALNUT STREET ST. PAUL 1, MINN.

For more details circle NED-776 J4 on enclosed inquiry slip

perfect bridge
between truck
and dock



RITE-HITE®

ADJUSTABLE LOADING RAMP

Exclusive Precision Counterbalance . . . horizontal adjustment . . . simple mechanical design . . . no pipes, pumps, gears, motors — little or no maintenance needed.

CAPACITIES
10,000 and 20,000 lbs.

3 TYPES
5 MODELS
- Permanent
- Self-Contained Dock and Ramp
- Flush type

RITE-HITE DIVISION
LOOMIS MACHINE COMPANY
FOURTH AND PINE STS. • CLARE, MICH.

GET THE FACTS AND YOU'LL GET RITE-HITE
Write Dept. B-94.

For more details circle NED-777 J4 on enclosed inquiry slip

NEW ADJUSTABLE DRILL JIG
eliminates layout; cuts drilling time

Used for drilling holes through round stock and hex stock from ¼" to 2" and cap screws from ¼" to 1¼", the new Mathewson Adjustable Drill Jig eliminates layout and can cut drilling time on small lots to a fraction. And it eliminates the costs of special jigs for larger quantities. Holes for cotter pins, set screws, drive pins for bayonet joints, oil holes in tubular sections, and wiring holes in cap screws, are all typical of the operation that can be done more economically with this jig. Hole diameters range from .052" to .531", using your A.S.A. standard slip bushings. The hardened V-block has two 60-degree V's for centering round or hexagonal stock, one for ¼" to 21/32" diameter, one for 21/32" to 2" diameter. Adjustable stop for locating work longitudinally for drilling any distance from end, may be used on either side. Adjustable bushing carriers hold slip bushings and clamp work securely. Jig highly successful in permitting use of inexperienced drill operators. For circular write to: **Mathewson Machine Works**, 22 Hancock St., Quincy, Mass. *Advt.*

▲ For more details circle **NED-778 J4** on enclosed inquiry slip ▲

SPEED UP HAMMER AND TOOL OPERATIONS

Uses 6.5 cubic feet of air per minute at 80 p.s.i. Delivers from 0 to 13,000 completely controllable blows per minute as a result of Superior's exclusive metering trigger.

38 Tools Available For 150 Different Jobs

Each tool designed specifically for use with the Bantam Bully. Blank shanks available for new applications in your particular field.

Scaling Tools	Star Drills
Flat Chisels	Sheet Metal Cutters
Routing Chisels	Shear Cutter
Flat Sharp Edge Chisel	Cape Chisel
Flat Long Chisel	Spoon Face Chisels
Peening Tools	Muffler Cutter
Finishing and Forming Tools	Round Hose Hollow Gouges
Wedge Drivers	Wood Working Chisels
Oil Grooving Chisel	Wood Gouge

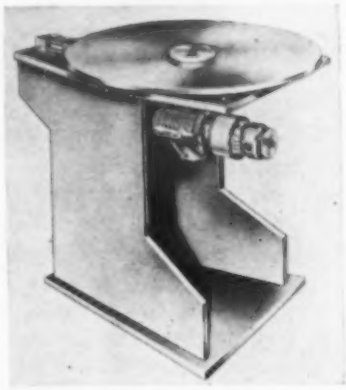
Write for further information to

SUPERIOR PNEUMATIC & MANUFACTURING, INC.

Main Office & Factory	West Coast Office	Canadian Office
4758 Warner Rd.	15615 Arrow Highway	347 Cannon Street, East
Cleveland 25, Ohio	Azusa, California	Hamilton, Ontario

▲ For more details circle **NED-779 J4** on enclosed inquiry slip ▲

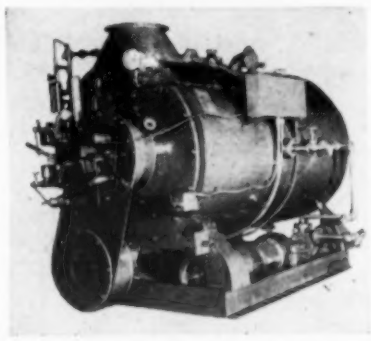
ROTARY INDEXING TABLE
for welders, machine tools, assembly



Constant speed alternating current gearmotor drives the Sciaky rotary indexing unit for dial feed applications. Electromagnetic and electrodynamic braking action provides smooth controlled acceleration and deceleration. Unit can be used on resistance welders, machine tools and for various assembly operations. Time of index and period of rest for each station are independently controlled and set to requirements of each setup. Table sizes range from 20 to 40 in. Provision is made for interlocking motor control of dial feed to operating sequence of reciprocating tools. Unit is furnished free-standing or for mounting on machine tools. Made by **Sciaky Bros., Inc.**, 4517 W. 67th St., Chicago 38, Ill.

▲ For more details circle **NED-781 J4** on enclosed inquiry slip ▲

STEAM BOILER
delivers 7500 lb of steam per hour



An installation space of only 9 ft 5 in. long, 6 ft wide and 6 ft 8 in. high is required for this 250-hp Cyclotherm steam generator, capable of delivering 7500 lb of steam per hour. Normal capacity is 6250 lb per hour. The MC250 burns either oil or gas, or oil and gas, and is designed for 15 to 200 psi pressure. Power is obtained through Cyclonic combustion principle coupled with two-pass design. Revolving spiral vortex of flame in combustion chamber travels at rate of 290 fps. All fuel is consumed in combustion chamber. Boiler is equipped with modulating unit that operates 30 to 100 per cent of capacity. Made by **United States Radiator Corp.**, Cyclotherm Div., Dept. NED, Oswego, N. Y.

▲ For more details circle **NED-782 J4** on enclosed inquiry slip ▲

Wrought Iron Chain & Slings

McKay Co.—Sizes, specifications, link dimensions, standard finished and other information on fire-welded wrought iron chains in ⅜-in. material diameter and larger are found in 12-page bulletin C. Drawings show various types of single and double branch sling chains, and attachments and accessories which can be used. Working load limits of each type are given.

▲ For more details circle **NED-783 J4** on enclosed inquiry slip ▲

FLAMELESS BLOW TORCH

for quick heat up to 750°

Use the Mamco Flameless Blow Torch on any application requiring a concentrated hot air blast. You can soften, form, mold and patch plastics, etc. easily with safety . . . The Mamco Flameless Blow Torch gives you quick heat up to 750° *without flame.*

Powerful Mamco electric motor 110-120 Volt AC and DC. Turbo type fan provides steady, strong air blast. Eight foot heavy duty cord. Double jacketed heater housing. Adjustable air intake. Order direct.

Price $28.50

Master APPLIANCE MFG. CO. RACINE, WISCONSIN

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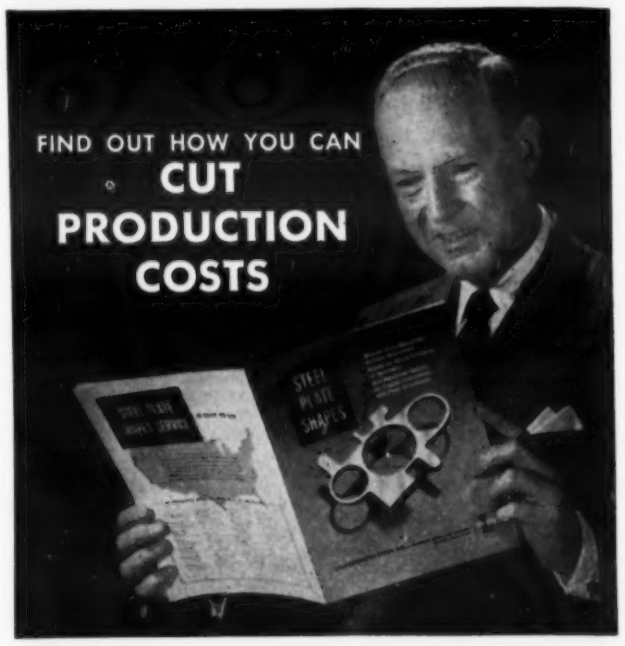


This new book on Steel Plate Shapes Service can show you how to save time, money and manpower in production with preformed component parts. Here's how this booklet can help you to cut production costs.

Steel Plate Shapes Service helps you eliminate one or more production steps, free your machines for other work, speed your manufacturing operations. Formed to close tolerances from rolled steel plate, these shapes save fit-up time . . . can often be used without machining. You save by paying freight only on the part you use, reduce costly steel plate inventories, get rid of the headache of scrap handling and scrap losses.

You get plate that's shaped to save you money—formed to your specifications. We work directly from blueprints. Over 150 major machines are available to flame-cut, shear, blank, press, bend or otherwise form rolled steel plate. Parts can be furnished as formed, or rough- or finish-machined. We also maintain a large stock of standard dies of all types.

FOR FULL INFORMATION on Steel Plate Shapes Service, send for Bulletin 712. The coupon or a request on your company letterhead will bring a free copy at no obligation. Address By-Products Steel Co., 676 Strode Avenue, Coatesville, Pa.

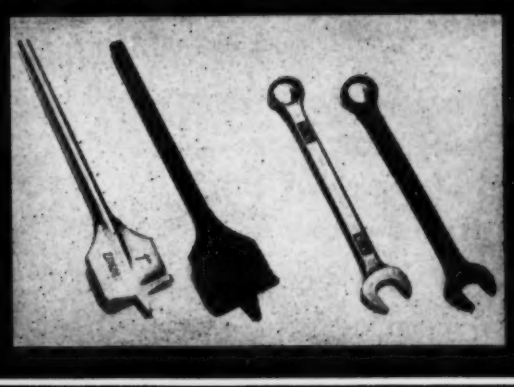
LUKENS **BY-PRODUCTS STEEL CO.**
A Division of Lukens Steel Company

BY-PRODUCTS STEEL CO.
676 Strode Avenue
Coatesville, Pa.
Please send me a free copy of Bulletin 712.

NAME.....
TITLE.....
COMPANY.....
CITY.....ZONE.....STATE.....

▲ For more details circle **NED-785 J4** on enclosed inquiry slip ▲

ALMCO
Supersheen
SPEED FINISHING
ALBERT LEA, MINN.



BARREL FINISHING Descaling COMPOUNDS

Recognized as the finest available, Supersheen offers a wide variety of *Descaling Compounds* that are "tailored to fit" your specific requirements. They provide, with various types of abrasive chips, accurately controlled processing — they produce clean surfaces and true colors — they are economical — and achieve consistently superior results.

Send today for complete details of Almco Supersheen Compounds. Over 40 different standard types.

ALMCO **Supersheen**
AMERICA'S LARGEST MANUFACTURER OF ADVANCED BARREL FINISHING EQUIPMENT – MATERIALS AND COMPOUNDS
ALBERT LEA, MINNESOTA

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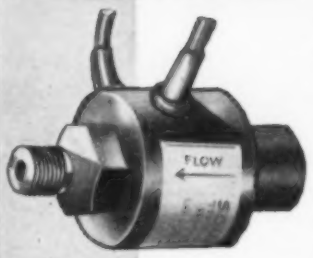
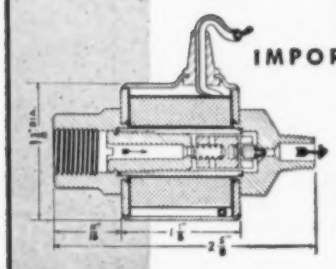
SOLENOID VALVES WITH ADVANTAGES PLUS



This valve of unique and practical design has proved itself in the past seven years to have extreme endurance and reliability. Important parts are stainless steel and no gaskets are used whatsoever. All parts silver brazed for rigidity. Look no further for a solenoid valve that will give years of trouble free, efficient service. Write today for full information. Samples available for inspection and test.



IMPORTANT FEATURES:

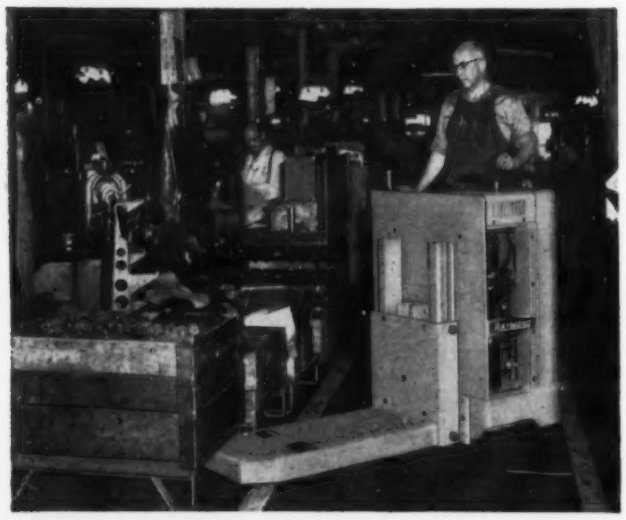
- All brazed construction
- No mounting brackets
- Weight 5 ounces
- Positive seal at any pressure
- Operates in any position
- Operates up to 1000 cycles per minute
- Power consumption 1 to 3 watts
- Pressure up to 200 p.s.i.
- Straight through flow

Specialty PRODUCTS CO., INC.
3725 Monitor Ave. • Minneapolis 16, Minnesota

For more details circle NED-786 J4 on enclosed inquiry slip

FIRST TIME

An electric truck made expressly for the production floor



MODEL EL4P Cap. 4,000 lbs. Patent No. 2,564,002

RAYMOND LOW-LIFT

PLATFORM ELECTRIC TRUCK

SAVE SPACE, SPEED WORK on your production floor with the RAYMOND Low-Lift Platform Truck. This compact truck actually operates in 5-ft. hand truck aisles . . . positions work-in-process right at machines.

RAYMOND LOW-LIFT lets you store stock in central location . . . serve 2 to 4 production areas with one man and one truck. Result: you save manpower, speed up the flow of materials, free floor space for more men and machines. RAYMOND Low-Lift travels up to 5½ mph loaded, up to 6 mph empty.

USE THIS TRUCK in the warehouse and on the shipping dock too . . . it maneuvers with ease inside boxcars, truck trailers. The Low-Lift's light weight permits safe use on low-capacity elevators and floors. Truck is equipped with new RAYMOND power unit that opens up like a book for fast, easy servicing. Exclusive load wheels provide more bearing surface, less wear on floor, easier pallet entry.

The RAYMOND CORPORATION
4134 Madison Street, Greene, N.Y.

( ) Please send latest Bulletin on Low-Lift Platform Electric Truck.

( ) Please have RAYMOND representative call.

NAME _____ TITLE _____
COMPANY _____
STREET _____
CITY _____ STATE _____

For more details circle NED-787 J4 on enclosed inquiry slip

New Literature and Catalogs

Circuit Breaker Engineering

Heinemann Electric Co.—24-page guide to application of circuit breakers to protective and control functions details the principle, design and operation of hydraulic-magnetic circuit breakers. Time delay curves, impedance charts and other practical data are provided. Past misconceptions which have limited circuit breaker uses are clarified.

For more details circle NED-788 J4 on enclosed inquiry slip

Industrial Filters

Cuno Engineering Corp.—Description of line of industrial Auto-Klean filters in 8-page illustrated catalog AK050 includes operating principles, construction and advantages. Specifications and capacities are given for standard models having flow rates from 1 to 3760 gpm and operating pressures of 125 psi.

For more details circle NED-789 J4 on enclosed inquiry slip

Steel & Wood Tanks

Denver Equipment Co. — Construction, specifications, assembly and list prices relative to bolted steel, welded steel and wood tanks are presented in 16-page bulletin T2-B5. Piece also details construction of wood tank foundations, erecting of wood tanks and briefly describes overflow launders for all types of tanks.

For more details circle NED-790 J4 on enclosed inquiry slip

Design & Welding Engineering

Eutectic Welding Alloys Corp.—Compact, 14-page "Manual of Design and Welding Engineering" details instructions on joint design with many drawings showing good and bad design. Manual shows types of joints possible, their names and when they should be used on a given operation. Section is devoted to overlaying and hard-surfacing.

For more details circle NED-791 J4 on enclosed inquiry slip

High Speed Friction Saw

Kling Bros. Engineering Works—Of two available bulletins on Kling high speed friction saws, No. 4200 describes latest developments on the horizontal stroke saw. Bulletin 9200 features downstroke and horizontal stroke saws in wide range of models and sizes. Complete data on blades are provided.

For more details circle NED-792 J4 on enclosed inquiry slip

Structural Material

Goodyear Aircraft Corp.—32-page brochure is descriptive of Bondolite, a high-strength, lightweight sandwich structural material. Developed for use in aircraft structures, product's versatility creates many applications in other fields, such as marine, rail and automotive transportation and building and furniture construction.

For more details circle NED-793 J4 on enclosed inquiry slip

NEW STRAPPING TAPE

Brainard now offers complete service—steel strapping and strapping tape

• The Brainard Strapping System, comprising a complete line of steel strapping, tools, and accessories, has now been expanded to include strapping tapes, both pressure-sensitive and gummed, and dispensers for all applications. The tapes are filament-reinforced to provide high tensile strength, and are designed for strapping applications. Brainard is the first company to offer both strapping methods. Brainard can give you unbiased recommendations on the best method for your applications. Most shipping departments and packaging lines can use both steel strapping and strapping tape to advantage.

Brainard
STEEL DIVISION
SHARON STEEL CORPORATION

For booklet write
BRAINARD STEEL DIVISION
Dept. HH-9, Griswold Street
Warren, Ohio

For more details circle NED-794 J4 on enclosed inquiry slip

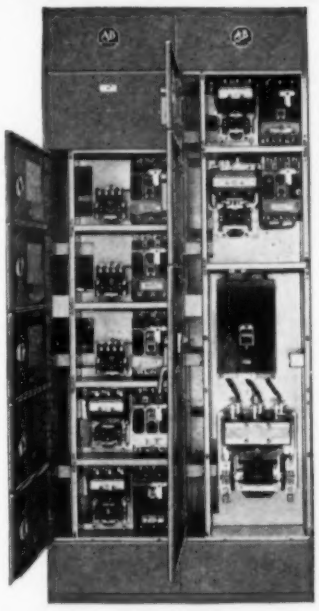
FREE—Illustrated catalog on a better method of grinding conical—spherical—cylindrical surfaces

Here are valuable details on the Geargrind Universal Oscillating Grinder. Whether you require production economy or tool room accuracy on internal and external grinding, you'll save time and money with this versatile and rugged grinder. This catalog gives complete information on types of work performed, methods of application and specifications. Write today—we will be happy to send you a copy.

THE GEARGRINDING MACHINE CO.
3925 Christopher, Detroit 11, Michigan

GEARGRIND Detroit

For more details circle NED-795 J4 on enclosed inquiry slip



Bulletin 798 Multi-unit Control Centers for Centralized Operations

A-B Quality

Bulletin 798 Multi-unit Control Centers can be assembled in one or more vertical sections containing starter panel units with disconnect switch or circuit breaker connected to a common power bus. The result is a completely enclosed, dead front, floor mounted switchboard, ready for connection to your motors in the plant.

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ALLEN-BRADLEY QUALITY MOTOR CONTROL

For more details circle NED-796 J4 on enclosed inquiry slip

20° Troughing Idler

JEFFREY Belt Idler Series HD and MD with DUOFLEX Seal . . (Patents applied for)

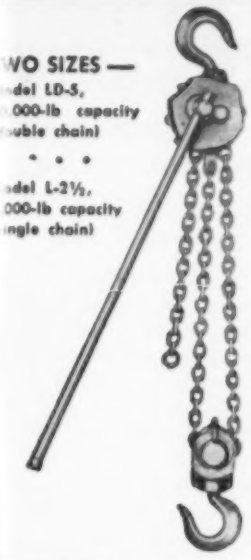
One seal keeps dirt out, another keeps grease in. Built strong and well balanced for long, trouble free service.
A type and size for every need: Impact Absorption, Troughing Training, Return Training, Spool Return, Return and Spool Return Training Idlers.

THE JEFFREY MANUFACTURING CO.
Columbus 16, Ohio

IF IT'S MINED, PROCESSED OR MOVED . . . IT'S A JOB FOR JEFFREY!

sales offices and distributors in principal cities

For more details circle NED-797 J4 on enclosed inquiry slip



TWO SIZES —
Model LD-5, 10,000-lb capacity (double chain)
• • •
Model L-2½, 5,000-lb capacity (single chain)

New . . . Different . . . Better

COFFING Super Power

COIL CHAIN RATCHET LEVER HOIST

For over two years the entire production of Coffing's new Super Power Hoist has gone into military service. Now it is available to bring new standards of ratchet hoist performance to civilian users. Here are just a few advantages the new hoist offers:

TOUGH for safety and dependability
Every load-holding ratchet is tested at 30,000 lb. "Drop Test" spot checks hoists under 40,000-lb impact load.

SIMPLE in design
May be completely disassembled in the field.

CONVENIENT to use
Handle length is adjustable may be operated from either side of hoist. Needs only 70-lb pull to lift 10,000-lb load.
For full information write for bulletin X9L.

COFFING HOIST COMPANY
Danville, Illinois
Originators of the Ratchet Lever Hoist

Quik-Lift Electric Hoists • Hoist-Alls • Mighty-Midget Pullers • Spur-Gear Hoists
Differential Chain Hoists • Load Binders • I-Beam Trolleys

▲ For more details circle NED-798 J4 on enclosed inquiry slip ▲

Electronic Temperature Control

...with Alnor Accuracy

Alnor, pioneer in the field of electronic temperature instruments, brings you automatic, precise temperature control for heat-treating furnaces, bake ovens—in fact, for any heating device whether electrically heated or fuel fired. It's the Alnor Temperature Controller—simple in design and operation, its accuracy proved on thousands of installations in many industries.

Easily and quickly installed, this instrument is ready to give you accurate controller service on new or existing heating equipment temperature—you merely set the pointer at the desired temperature and forget your indicating and controlling problems. But find out for yourself how Alnor accuracy and dependability can serve you in controller service; write today for complete details on the Alnor Temperature Controller... Alnor accuracy at a price you can afford. Illinois Testing Laboratories, Inc., Rm. 529, 420 N. La Salle Street, Chicago 10, Illinois.

Alnor PRECISION INSTRUMENTS FOR EVERY INDUSTRY

▲ For more details circle NED-799 J4 on enclosed inquiry slip ▲

TUBING BY SUPERIOR SAVES 33% ON PRODUCTION COST OF AUTOCLAVE COVERS

Autoclave Engineers, Inc. of Erie, Pa. made a 33% saving on covers of "dash pots" for pressure-testing materials by using tubing as a component. Stainless steel forgings used in covers of these Magne Dash* autoclaves had to be machined and deep drilled—time-and-material wasting operations. Superior cold drawn stainless tubing Type 316 eliminated this expensive work and reduced scrap loss almost to zero. At the same time, minimum yield strength was raised from about 40,000 psi to 100,000 psi. Easily threaded, corrosion resistant Type 316 tubing—or one of our more than 55 other analyses—may well end one of *your* problems. Send for our free Catalog Section 20 on Stainless Steel Tubing, and tell us about your tubing needs.

*Licensed by Standard Oil Company (Indiana) U.S. Patents 2631091 and 2661938

All analyses .010" to ⅝" O.D.
Certain analyses in light walls up to 2½" O.D.

SUPERIOR TUBE COMPANY
2018 Germantown Ave., Norristown, Pa.

Superior Tube
THE BIG NAME IN SMALL TUBING

▲ For more details circle NED-800 J4 on enclosed inquiry slip ▲

New Processes and Materials

MASONRY & STEEL COATING applied by spray, brush or roller

Drying in about one-half hour after application to concrete, brick, cinder block, plaster, asbestos shingles or steel surface, Vimasco Carlon coating provides a smooth and resilient skin. It will withstand weathering and abrasion and resists moisture, chipping and peeling. Bakelite vinyl resin-base coating is unaffected by dust, salt water or chemicals and can be applied by spray, brush or roller. White, black and aluminum and 20 colors are available. Made by **Vimasco Corp.**, Box 4063, Station A, Charleston, W. Va.

▲ For more details circle NED-801 J4 on enclosed inquiry slip ▲

TRACING PAPERS & CLOTH printed with nonreproducible ink

Various grades of tracing papers and tracing cloth are available with grid sections printed with nonreproducing ink. Rolls are 30 in. wide with 28-in. engraving and lengths are 20 and 50 yd. Sheets, available from rolls, are offered up to 30 in. wide and in any length. Grid sections available are 4 x 4, 8 x 8 and 10 x 10 per inch. Made by **John R. Cassell Co.**, 112 W. 42nd St., New York 36, N. Y.

▲ For more details circle NED-802 J4 on enclosed inquiry slip ▲

STENCIL-COVERING SPRAY permits reuse of used cartons

Stenciling, crayon marks, printing and labels on shipping containers can be covered with Stencil-Kover, a fast-drying tan colored material packaged in a spray can. It is used to cover marking errors on new crates, boxes, cartons or drums, or as a means of reusing old containers. New stenciling or marking in the covered area can be within 90 seconds after application. Made by **Reynolds Ink, Inc.**, Dept. N, 4500 Euclid Ave., Cleveland 3, O.

▲ For more details circle NED-803 J4 on enclosed inquiry slip ▲

FASTER CHUCKING means SPEEDIER PRODUCTION with the Foredom CHUXRITE RAPID-ACTION COLLET VISE

For cylindrically-shaped parts to 1/4" diameter use with DRILL PRESS, MILLING or TAPPING MACHINE, LATHE, etc. and on the bench for assembly work, polishing, cleaning, soldering, etc.

only $7.90 (collets $1.40 each)

7 sizes of collets available from 1/16" to 1/4" by increments of 1/32". Complete set in hardwood holder $8.75.
At your industrial supply distributor. If he cannot supply, order direct.

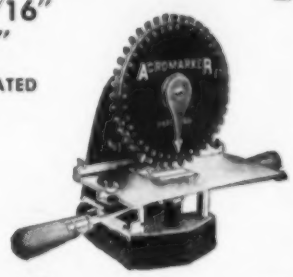
FOREDOM ELECTRIC CO., DEPT. 5268
27 Park Place • New York 7, N. Y.

▲ For more details circle NED-804 J4 on enclosed inquiry slip ▲

ACROMARK MEANS "ACCURATE MARKING"

THE ACROMARKER NAME PLATE AND PARTS STAMPING MACHINE COMES IN SIZES FROM 1/16" TO 3/16"

HAND OPERATED AND FOOT MODELS



NON-TIRING FAST-MAKES PERFECT STAMPING OF LETTERING & NUMBERING EASY AS DRIVING A CAR
DIE WHEELS AND DIES ARE REPLACEABLE

The ACROMARK *Company*
7-11 MORRELL ST., ELIZABETH 4, N. J.
"THE ORIGINAL MARKING SPECIALISTS"

▲ For more details circle NED-805 J4 on enclosed inquiry slip ▲

ROLOCK FABRICATED ALLOYS (HEAT AND CORROSION RESISTANT)

NEW and COMPLETE . . .

specialized reference on Pickling, Degreasing, Galvanizing and other processing operations. Baskets, Manual and Motor-powered Barrels . . . Trunnion, Centrifugal, Bottom-dumping Baskets, Shell Case containers.

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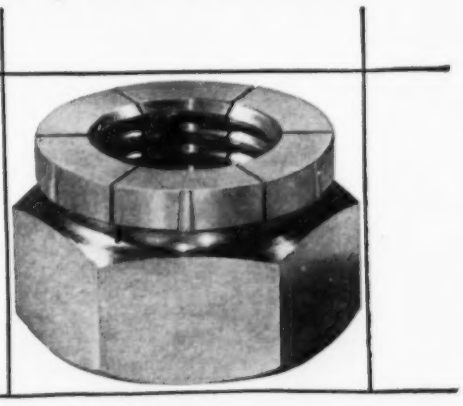
Send for this No. B-9 Corrosion Resistant Section of Rolock's catalog... just off the press. It's full of valuable ideas.

11 RL 52 R

ROLOCK, INC.
1412 KINGS HIGHWAY, FAIRFIELD, CONN.

▲ For more details circle NED-806 J4 on enclosed inquiry slip ▲

they won't work loose



FLEXLOC Self-Locking Nuts lock and stay tight, no matter how severe the vibration. Yet they can be easily removed and reused repeatedly. They are stop nuts too; they stay put in any position on a bolt when the locking threads are fully engaged. And FLEXLOCS are one piece, all metal—nothing to assemble, come apart, lose or forget. See your local industrial distributor for literature and samples or write STANDARD PRESSED STEEL CO., Jenkintown 24, Pa.

FLEXLOC LOCKNUT DIVISION

SPS JENKINTOWN PENNSYLVANIA

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WATER-PICK-UP

with SPENCER VACUUM

Any Spencer Vacuum System will pick up liquids—after scrubbing, accidental spillage or floods and from sump tanks. For large volume pick up, special collector tanks from 6 to 100 gallons capacity or liquids may be discharged direct to the sewer.

Spencer also picks up hot materials, reclaims metals and of course will clean large industrial areas and your offices in a remarkably short time. Bulletin on request.

THE SPENCER TURBINE COMPANY • HARTFORD 6, CONNECTICUT

SPENCER HARTFORD 466-P

For more details circle NED-808 J4 on enclosed inquiry slip

FREE TECHNICAL DATA BOOK ON G-E FUSES

There's a lot more to fuses than an assortment of miscellaneous parts. Use the handy maintenance hints and technical information to select proper fuses, prolong fuse life, and prevent premature blows and shutdowns. This booklet costs you nothing—gives useful information on:

MAINTENANCE HINTS

•

HOW A G-E TIME-DELAY FUSE OPERATES

•

FUSE TYPES AND SIZES

For your copy, write Section D135-961, General Electric Company, Construction Materials Division, Bridgeport 2, Connecticut.

Progress Is Our Most Important Product

GENERAL ELECTRIC

For more details circle NED-809 J4 on enclosed inquiry slip

BILLMYRE BLOWERS and EXHAUSTERS

HOW MUCH AIR OR GAS?

Get exactly the right amount of clean, dry air or gas with the right size BILLMYRE Blower and Exhauster.

- TAILOR-MADE PRESSURE . . . units to suit every gas or air pressure requirement, from ½ to 7-lbs.
- CONSTANT PRESSURE . . . self-governing design eliminates controls, guarantees consistently even pressure.
- NO CONTAMINATION . . . no internal lubrication, air is *always* clean and dry.
- LOW MAINTENANCE COST . . . only one moving part, the rotating shaft-impeller assembly.

LAMSON

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Gentlemen:
Without any obligation on my part, please send me my copy of the Lamson Billmyre Blower and Exhauster Catalog B-6.

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Company_____

Address_____

City_____ Zone____ State____ 2476

For more details circle NED-810 J4 on enclosed inquiry slip

New Literature & Catalogs

Electric Power Drives

Sterling Electric Motors, Inc.—8-page photo-caption style folder illustrates sixty applications of electric power drives on many different types of machinery and equipment. Food, metalworking, chemical, petroleum and plastics industry uses are all represented.

For more details circle NED-811 J4 on enclosed inquiry slip

Air Gaging

Taft-Peirce Mfg. Co.—28-page catalog 613 illustrates and describes various CompAIRator air gaging units and accessories, including single and multiple-dial types. Air gaging techniques and advantages are also discussed. Data are given on standard air plug, air ring and air snap gas members.

For more details circle NED-812 J4 on enclosed inquiry slip

Solenoid Valves

Atkomatic Valve Co.—Features of bronze or stainless steel, high pressure, pilot-operated and direct-lift solenoid valves are illustrated in 4-page bulletin HP 201 with diagrams of electrical circuits used for normally open and closed operations. Valves are offered for pressures up to 5000 psi.

For more details circle NED-813 J4 on enclosed inquiry slip

Precision Cylindrical Grinders

Landis Tool Co.—28-page catalog CG-54 provides complete data on 25 precision cylindrical grinders. Standard machines covered are universal, plain, roll, crankshaft regrinding and centerless types. Cam contour, multiple wheel, crankpin, piston, valve face and race way comprise special purpose machines described. Plain grinders have swings ranging from 4 to 48 in., center distances from 12 to 268 in.

For more details circle NED-814 J4 on enclosed inquiry slip

Vibration Analyzers & Balance

International Research & Development Corp.—"Balance—Final Dimension of Precision" is a 16-page illustrated brochure which discusses the relationship between vibration phenomena and precision manufacturing. It illustrates the advantages of IRD vibration analysis equipment in seeking out and eliminating unwanted vibration in rotating parts.

For more details circle NED-815 J4 on enclosed inquiry slip

Compressors & Vacuum Pumps

Allis-Chalmers Mfg. Co.—Operation and construction of A-C single-stage water-cooled rotary compressors and vacuum pumps applicable to most air or gas handling requirements are described in illustrated 12-page bulletin 16B8126. General specifications, typical air piping arrangement diagrams and proper accessories for securing the best results are included.

For more details circle NED-816 J4 on enclosed inquiry slip

This New Small Flow Valve Just Won't Quit!

Proven under pressure in 2 years of rugged field tests, new Leslie SMALL FLOW Reducing Valve fills the bill where small flows of steam, air, gas or liquid are a problem. Famous Leslie quality and design means you set it and forget it.

Easy to size for top performance Send for really complete data in Bulletin 511-A.

2639

TRADE LESLIE MARK

THE FIRST NAME IN PRESSURE, TEMPERATURE AND LEVEL CONTROLS Since 1900

LESLIE CO., 227 Grant Ave., Lyndhurst, New Jersey

For more details circle NED-817 J4 on enclosed inquiry slip

2 STAGE CONTROL OPERATION WITH 1 MERCOID® PRESSURE CONTROL

AVAILABLE IN 17 PRESSURE RANGES FROM

0-30" VAC. TO 300-2500 PSI.

WITH THE SENSITIVITY YOUR APPLICATION REQUIRES

Mercoid DA-400 Series Pressure Controls are dual purpose controls, incorporating a single pressure element operating two separate, independently adjustable Mercoid magnetic switches. The switches may be used for multiple circuit control for various operations as the control responds to pressure changes.

AVAILABLE FOR FOLLOWING OPERATIONS:

SPECIFICATION No. 4122. One circuit opens on increase of pressure—second circuit opens on further increase of pressure.
SPECIFICATION No. 4129. One circuit closes on increase of pressure—second circuit closes on further increase of pressure.
SPECIFICATION No. 4132. Both circuits open at intermediate pressure. One circuit closes on increase of pressure above neutral zone—second circuit closes on decrease in pressure below neutral zone.
SPECIFICATION No. 4123. Both circuits close at intermediate pressure. One circuit opens on increase of pressure above neutral zone—second circuit opens on decrease in pressure below neutral zone.

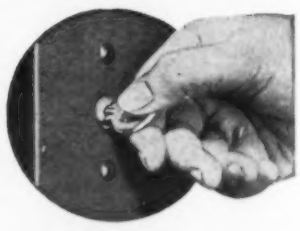
WRITE FOR BULLETIN NO. 92.

THE MERCOID CORPORATION
4201 BELMONT AVE., CHICAGO 41, ILLINOIS, U.S.A.

For more details circle NED-818 J4 on enclosed inquiry slip

It's handle-free . . . just turn the key

BERGER Key-Control steel locker



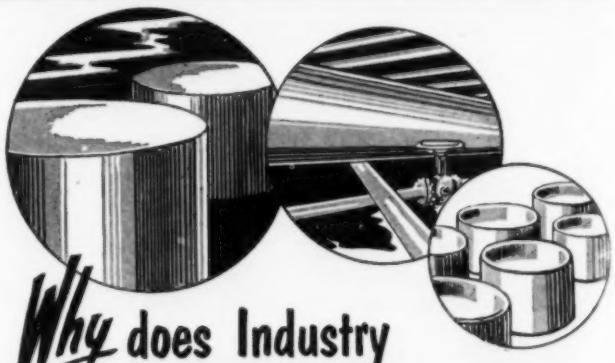
The first INDUSTRIAL STEEL LOCKER *with a "memory"*

Its key is the only handle this revolutionary new industrial steel locker requires. The door *pre-locks* when key is removed, and locks *automatically* when shut. No chance to forget. Tools, clothing, personal effects get full-time locked protection.

Efficient locker facilities are a great boost for employee morale. Your Berger representative will help with ideas and suggestions, or write us. Remember: only Berger offers Key-Control, as well as the largest selection of standard steel lockers.

REPUBLIC STEEL CORPORATION
BERGER MANUFACTURING DIVISION
1084 Belden Ave., Canton 5, Ohio • Export Dept. ⊙ Chrysler Bldg., New York 17, N. Y.

For more details circle NED-819 J4 on enclosed inquiry slip



Why does Industry buy ALCONOX for ALL Equipment Cleaning Problems?

- Simply because for glass piping systems, tanks, metalware, ball bearing assemblies, kettles and all general industrial equipment Alconox has proven itself time and again the most versatile, safe, efficient multiple cleaning detergent on the market.

If that isn't enough; Alconox will do all of this at a cost of less than 2 cents per gallon.

B177

Literature, samples and the name of your nearest distributor on request.

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WETTING AGENTS DETERGENTS
61 Cornelison Ave. Jersey City 4, N. J.

AVAILABLE IN

BOX of 3 lb. . . . . $ 1.95
CARTON of 12 boxes of 3 lbs. 18.00
DRUM of 25 lbs. . . . lb. .45
DRUM of 50 lbs. . . . lb. .43
DRUM of 100 lbs. . . . lb. .40
DRUM of 300 lbs. . . . lb. .37
Slightly higher on Pacific Coast

For more details circle NED-820 J4 on enclosed inquiry slip

MOUNTED WHEELS AND POINTS

How they speed production told in free booklet

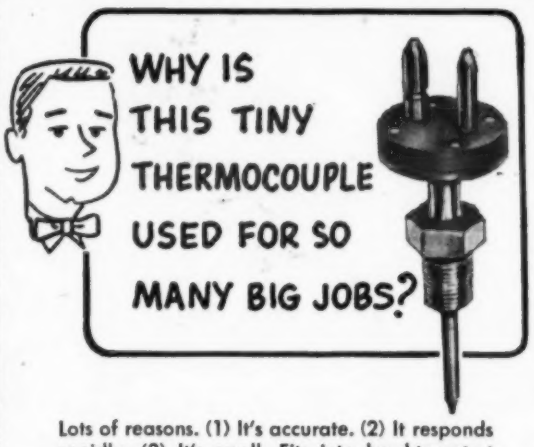
You can rough or finish grind, deburr, chamfer, break corners... do dozens of production line operations fast, safely with Mounted Wheels and Points by CARBORUNDUM. How they save hours of production time over slow, tedious hand finishing operations is shown in this free booklet. The wide range of shapes and sizes of these abrasive wheels permits grinding and finishing on any surface—flats, contours, hard-to-reach areas, inside diameters of all types. You can use them with maximum economy on portable grinders or all types of internal grinders. This booklet, "Mounted Wheels and related Abrasive Products by CARBORUNDUM" gives you complete information... tells you what types of abrasives are recommended for all kinds of metals and some non-metallics. Charts show the complete range of shapes and sizes available. Grading recommendations for many jobs are included—for both high speed portable grinding and internal grinding. A special section describes MX® Mounted Wheels ... the wheels that finish as they cut. Another section covers coated abrasive products by CARBORUNDUM for rapid finishing with portable equipment.

Send for your free copy of this helpful booklet. Use the inquiry form provided by this publication—or write **The Carborundum Company,** Dept. NED 81-49, Niagara Falls, New York.

"Carborundum" and "MX" are registered trademarks which indicate manufacture by The Carborundum Company, Niagara Falls, N. Y.

81-49

▲ For more details circle **NED-821 J4** on enclosed inquiry slip ▲



Lots of reasons. (1) It's accurate. (2) It responds rapidly. (3) It's small. Fits into hard-to-get-at places. (4) Connects and disconnects quickly. (5) It's durable. Stainless steel protection tube resists corrosion. (6) Made in a range of types and sizes: elements of IC, CC, or CA; brass or stainless NPT bushings; immersion lengths from 1" to 48" or more; protection tube diameters from 1/16" to 1/4".

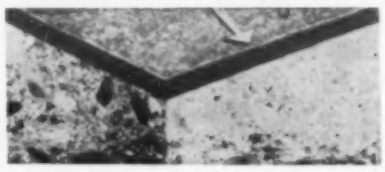
T-E makes many thermocouples for almost any kind of temperature-measurement. Interested? Write for Bulletin T.

Thermo Electric Co., Inc.
SADDLE RIVER TOWNSHIP, Rochelle Park P.O., NEW JERSEY
CANADA • THERMO ELECTRIC (Canada) Ltd., BRAMPTON, ONT.

▲ For more details circle **NED-822 J4** on enclosed inquiry slip ▲

New Processes & Materials

SAFETY FLOORING MATERIAL disseminates static, resists wear



Areas where red label products are made, handled, stored and used; where explosives or explosive dusts prevail; or where static charges are generated by continuous processes are applications for DPS Masterplate hard surface safety flooring material. It produces an iron-clad surface that is static disseminating, spark resistant, noncombustible and wear resistant. Optimum electrical conductivity is maintained throughout a wide range of temperatures. Floor is easy to clean, resists effects of moisture and steam, is nondusting and corrosion resistant. The gray ready-to-use product is applied as a dust-coat or shake to freshly floated concrete. Made by **Master Builders Co.,** Dept. NED, 7016 Euclid Ave., Cleveland 3, O.

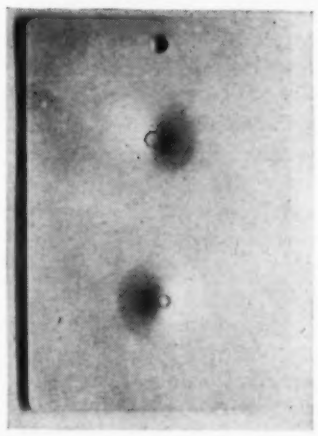
▲ For more details circle **NED-824 J4** on enclosed inquiry slip ▲

SEALING COMPOUND effective range is —30 to 158° F

White-colored sealing compound adheres to any clean surface and remains permanently tacky. It can be used over a temperature range from −30 to 158° F. Compound, designated No. 570.4, does not stain or craze white synthetic enamel or plastics. It can be applied by trowel or air pump. Made by **Presstite Engineering Co.,** Dept. NED, 3798 Chouteau Ave., St. Louis 10, Mo.

▲ For more details circle **NED-825 J4** on enclosed inquiry slip ▲

SURFACE TREATMENT prepares aluminum for enameling



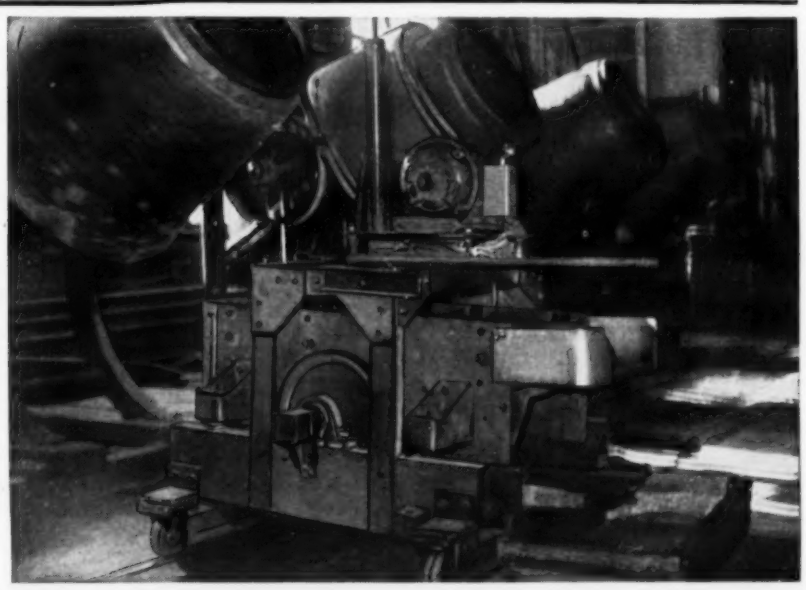
Aluminum surfaces are prepared for porcelain enameling by Pre-Namel 420 chemical bath treatment. The bath, which eliminates need for prefiring, lasts indefinitely and is controlled by simple chemical tests. Illustration shows a test sample of enameled aluminum, using this pretreatment. A 3½-lb weight was dropped from 12 in. onto a ½-in. steel ball on the sample. Enamel was only slightly cracked, and no ground coat parted from the metal. Made by **Parker Rust Proof Co.,** Technical Div., 2187 E. Milwaukee Ave., Detroit 11, Mich.

▲ For more details circle **NED-826 J4** on enclosed inquiry slip ▲

Here's How The WATERBURY BUCKLE CO. Finds Good Use For This

MIGHTY-MITE VIBRATING SCREEN

It seems there's no limit to the screening versatility of Mighty-Mite vibrating screens. This double deck Mighty-Mite separates sawdust from buckle parts after they come out of the tumbling barrel operation. Note the screen moves on tracks to take the feed from each of a total of six tumbling barrels. The finished product comes off the top deck of the Mighty-Mite into a tote box. The sawdust goes through the top deck and is caught on a solid pan lower deck to be discharged off the front of the screen into a second tote box.



MADE IN SINGLE AND DOUBLE DECK MODELS TO HANDLE UP TO 15 T.P.H. SIZES 1½'x4' to 2'x8' • WIRE CLOTH OPENINGS TO MEET ANY REQUIREMENT

Remember . . .
WHEN THE LOAD IS LIGHT SCREEN IT RIGHT WITH MIGHTY-MITE

GET THE LABOR SAVING FACTS NOW! • SEND FOR NEW LITERATURE

SCREEN EQUIPMENT CO., INC. BUFFALO 25, N. Y.
One of America's Largest Makers of Vibrating Screens Exclusively

▲ For more details circle **NED-823 J4** on enclosed inquiry slip ▲

First Choice LIVERMONT TORQUE WRENCHES

for every industrial use

LIVERMONT TORQUE WRENCHES are years ahead — in streamlined design, in rugged construction, in hair-line accuracy, dependability and range of capacities. There are no clumsy, external gauges or "gadgets" to hamper use of Livermont tools . . . Patented, torque controlling mechanisms are self-contained. So Livermont wrenches are balanced — as easy to use as conventional wrenches.

No matter what your torque requirement — from one inch-ounce to 5000 inch-pounds — there is a Livermont tool to solve the problem.

(Right) Livermont's new "HI-LO TORQ." Only torque wrench on the market with adjustable and reversible ratchet head! 16 models. 10 to 500 foot pounds. Also plain square drive.

(Left) Livermont's new "ROTO-TORQ." A screwdriver that torques down to 4 inch-ounces. A precise, dependable, long-life tool for electronics or similar assemblies. Fits over 50 standard bits and sockets.

Write Dept. NED for illustrated price catalog. Over 100 styles, models and capacities.

RICHMONT, INC. "The Home of Torque"
922 S. MYRTLE AVE., MONROVIA, CALIFORNIA

▲ For more details circle **NED-827 J4** on enclosed inquiry slip ▲

KEEP UP TO DATE WITH THIS *FREE* IDEA SERVICE....

KOILED KORDS* APPLICATION REPORTS GIVE CASE HISTORIES OF SUCCESSFUL USES OF RETRACTILE CORDS.

Let us send you a file-full of ideas at no cost to you, and we will see that you get future Application Reports as issued. Write today.

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IN FACT KOILED KORDS, RETRACTILE CORDS, HAVE THOUSANDS OF USES IN COMMUNICATIONS — ON ELECTRICAL MACHINES THAT MOVE — IN THE HOME

See for yourself through KOILED KORDS Application Reports how versatile KOILED KORDS can be. You, too, may find them the answer to a problem.

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Koiled Kords
INCORPORATED

Box K, New Haven 14, Connecticut
In Canada: R. D. Fleck & Co., Ltd., Oshawa, Ont.
*KOILED KORDS is the trademark of Koiled Kords, Inc.

▲ For more details circle **NED-828 J4** on enclosed inquiry slip ▲

...another characteristic contributing to ABART QUALITY

Long-lasting, efficient, economical performance is built into all Abart units. Proven dependability...on numerous applications for thirty years... makes Abart the favorite of design and maintenance engineers.

Over 75 types and sizes (spur, worm, and combination)—ratings from 1/50 to 168 hp. with ratios up to 10,000 to 1—to meet your requirements. Specials to order.

Send for free, pocket-size catalog covering Abart's complete line of Speed Reducers and Gears.

Abart GEAR & MACHINE CO.
4826 WEST 16th STREET • CHICAGO 50, ILLINOIS

▲ For more details circle NED-829 J4 on enclosed inquiry slip ▲

SPECIAL TAPS

by DETROIT

ARE TOPS FOR A GOOD REASON

Every detail of every special tap produced is recorded under a unique Detroit Tap system.

This record system controls quality from your first order. Having found the "right" tap for the job, you'll get the same results with every additional tap you order.

Such records minimize development of special taps. Often, the new problem is so similar to a previous one—already a matter of record—that a minimum of research and engineering is required. The advantage of such service is obvious. See your Detroit Tap representative today.

DETROIT TAP & TOOL CO.
8615 E. EIGHT MILE RD. BASELINE, MICHIGAN

▲ For more details circle NED-830 J4 on enclosed inquiry slip ▲

NEW PULLEY DESIGN MEANS LONGER LIFE, LOWER COSTS, LESS MAINTENANCE

The new design American Pulleys are the best friends a conveyor belt ever had. They're easier to install, built to take the severest kind of service, and cost next to nothing to maintain because they are fully dirt- and splash-proof. Size for size, they will outwear, outwork any other pulleys made.

New Type "HD" Pulley features the Wedg-Tite Hub, a special interchangeable split-tapered design which combines maximum strength with minimum weight to give the greatest shaft grip ever developed in a conveyor pulley. Two other types—Type "L" for light and medium duty, and Type "O" a steel split model—round out the new line to cover *all* types of service. See your distributor or write today for full information. There is no obligation.

▲ For more details circle NED-831 J4 on enclosed inquiry slip ▲

New Literature & Catalogs

Aluminum Industrial Trucks

Magnesium Co. of America, Tobey Aluminum Div.—New data file describing weight, flexibility and caster advantages of aluminum industrial trucks includes specifications for various sizes and styles of flatbed, multiple-deck and A-frame units. Trucks are made of aluminum alloy extrusions that serve as truck bed as well as frame. Torsional flexibility assures contact of all four wheels on ground at all times.

▲ For more details circle NED-832 J4 on enclosed inquiry slip ▲

Fabricating With Fluorothene Resins

Bakelite Co.—Property and fabrication data on Bakelite fluorothene resins are compiled in 16-page booklet J-739. Graphs and tables amplify the text. Recommendations on extrusion, injection and compression molding are included, along with application data.

▲ For more details circle NED-833 J4 on enclosed inquiry slip ▲

Technical Ceramics

American Lava Corp.—Mechanical and electrical properties of AlSiMag technical ceramics are tabulated in 4-page bulletin 544. Covered are vitreous ceramic materials, lava (made from natural stone) and refractories. Selection charts are arranged according to property values.

▲ For more details circle NED-834 J4 on enclosed inquiry slip ▲

Diamond Grinding Wheels

Action Diamond Tool Co.—44-page catalog 55 describes and specifies Jetaline and RoBot Resin diamond grinding wheels and diamond dressers. Jetaline wheels used with a coolant will cut in carbides depths up to 1/8-in. in a single pass. Diamond grit sizes range from 100 to 400 mesh in both types. Straight wheels range in diameter from 3/8 to 20 in.

▲ For more details circle NED-835 J4 on enclosed inquiry slip ▲

Sheet & Plate Cutting Machines

American Pullmax Co.—With a few simple tools and attachments, Pullmax sheet and plate cutters will perform straight, circle or freehand cutting; dish forming operations; standard beading, folding or joggling; slot and louver cutting; and special beading and forming of moldings. Nine models are described and illustrated in 12-page brochure.

▲ For more details circle NED-836 J4 on enclosed inquiry slip ▲

Self-Locking Fasteners

Nylok Corp.—Dimensions, thread sizes and other pertinent data relative to one-piece self-locking screws, bolts, set screws, hex nuts, clinch nuts, cap nuts, threaded inserts and special fasteners are provided in 12-page catalog 11A. Locking medium in fasteners is tough, resilient nylon pellet inserted permanently in body of bolt, screw or nut. Wedging action grips threads.

▲ For more details circle NED-837 J4 on enclosed inquiry slip ▲

WHEN LIGHTS GO OUT EXIDE® LIGHTGUARDS® GO ON INSTANTLY...AUTOMATICALLY!

Wherever people gather, there's a vital need for Exide Lightguard protection. Some industrial plants use as many as 200! Here are spots where you now need Lightguard emergency lighting protection: *Corridors, aisles, cafeterias, lobbies, boiler rooms, engine rooms, switchboard rooms, loading platforms, exits, firetowers.*

NEW MODEL M

With the new Model M you get instant adequate lighting whenever normal lighting is interrupted—no matter what the reason. The Model M has a two-rate charger—high rate or trickle. After the emergency, automatic controls recharge the Exide battery specially designed for long life, easy maintenance, dependable operation. UL-approved, can be plugged into any 115 volt outlet—each lamp illuminates up to 10,000 square feet.

WRITE for interesting folder with facts on why Exide Lightguards guarantee more protection for every dollar you invest in such equipment.

Exide INDUSTRIAL DIVISION
The Electric Storage Battery Co., Philadelphia 2, Pa.

▲ For more details circle NED-838 J4 on enclosed inquiry slip ▲

PROFITABLE PRODUCTIVE ECONOMICAL

THE SUREWELD® PORTABLE D-C WELDER

The Sureweld Gas Driven D-C Welder is small enough, portable enough to go wherever the operator can go. And that's why it's so profitable, productive, economical. Delays, expenses, interruptions normally a part of on-the-job welding are eliminated. More time is spent welding. More welding is done. And the savings are usually enough to repay its cost in a few short weeks. Its capacity is ample for 85-90% of on-the-job welding. We'll be glad to demonstrate in your shop what owners say is the most useful welder they ever had. Or to send a copy of bulletin NH-121. Write today.

Copyright 1953, National Cylinder Gas Company

NCG® National Cylinder Gas Company
840 N. Michigan Ave., Chicago 11, Illinois

▲ For more details circle NED-839 J4 on enclosed inquiry slip ▲

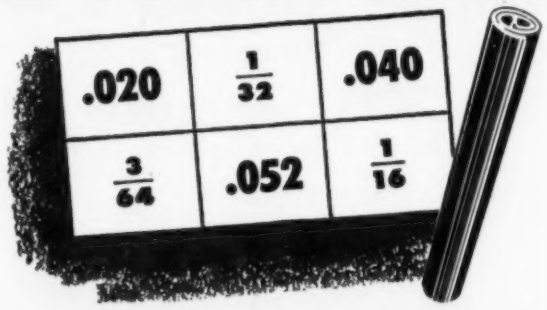
CLEAN OIL, GREASE, CHIPS, ETC., FROM METAL PARTS WITH THIS REMARKABLE "SUPER-SOAK" PARTS WASHER

In this unit, a chemical action "soaks" and dunks the parts, and then a swishing action "washes" them. This is developed from the old, proved "active-soaking, natural agitation" principle. No pumps, sprays or handwork. Cleaning time is *very* limited. Human hands are never in the solution, which may be hot or cold. Unit comes in standard or special sizes, shipped complete, ready to operate. Does a thoroughly satisfactory job at a low cost. Incidentally, there are some good sales territories still open. Write for detail circular, because this is one bet you won't want to miss.

THE SUPER-SOAK COMPANY, INC.
3770 S. Pennsylvania Ave., Milwaukee 7, Wis.

▲ For more details circle NED-840 J4 on enclosed inquiry slip ▲

Now available! Spirol flexible pins in miniature diameters!



SPIROL Pins are the only flexible fastenings made in such small diameters, because only SPIROL's great strength and radial tension can withstand shock, shear, and vibration in these minute sizes.

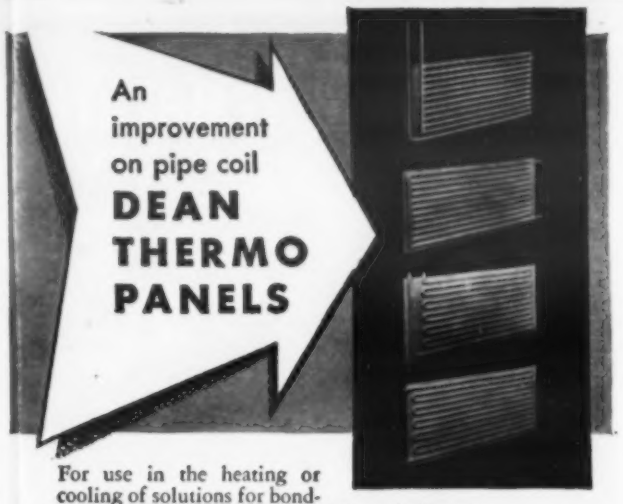
Reduce production costs: Because SPIROL Pin's spring action adjusts to contour of hole, locking itself in place, expensive drilling, reaming, and threading operations are eliminated.

Ideally suited for use in small assemblies, precision instruments, and miniature mechanisms, SPIROL Pins are made of stainless steel and brass. Also available with heads, and in diameters up to one-half inch.

Write for free sample pins and literature.

SPIROL PIN
C.E.M. COMPANY 79 School St. Danielson, Conn.

▲ For more details circle NED-841 J4 on enclosed inquiry slip ▲



For use in the heating or cooling of solutions for bonderizing, metal washing, degreasing, plating, etc. Low in first cost . . . light weight . . . space-saving . . . do away with expensive pipe coiling . . . provide efficient heat transfer.

Available in special shapes such as "U"s, "L"s, and cylinders . . . and in a wide range of materials, including iron, stainless steel, Monel and other special alloys.

Send for FREE bulletin giving facts and prices. **Dept. NE9**

Manufacturers Representatives Wanted.

Write for details. Choice territories now open.

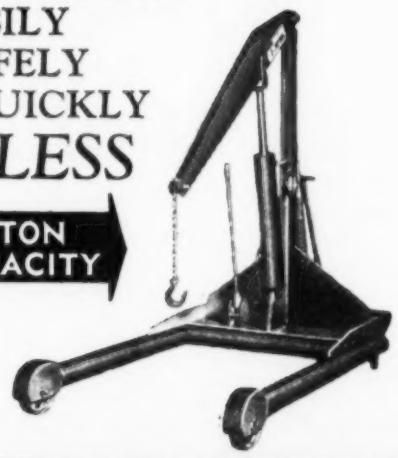
THERMO-PANEL
DIVISION
DEAN PRODUCTS, INC. • 616 Franklin Ave., Brooklyn 38, N. Y.
STerling 9-5400

For more details circle **NED-842 J4** on enclosed inquiry slip

BULKY, AWKWARD, HEAVY LOADS

Handled
· EASILY
· SAFELY
· QUICKLY
for LESS

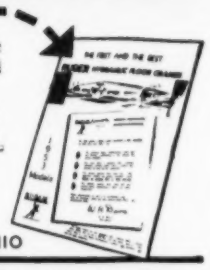
2 TON CAPACITY



SUBSTITUTE FOR AN ELEPHANT ®

GET THIS BOOK

Gives all the facts about Ruger's complete line of hydraulic floor and truck mounted cranes, capacities 1000 to 6000 lbs.



RUGER CRANES

619 West Fourth St. UHRICHSVILLE, OHIO

For more details circle **NED-843 J4** on enclosed inquiry slip

MATCH THE MIRACLE OF MODERN BUILDING

WITH THE NEW

LO-SIL
POWER ROOF VENTILATORS

Here's functional beauty combined with maximum operating efficiency. The new LO-SIL has been especially designed for schools, hospitals, libraries, churches, restaurants, and commercial buildings. Muckle —the most dependable name in power ventilation meets the new trend in architecture with the low silhouette, high efficiency LO-SIL VENT.

Totally enclosed motor mounted on vibration separators. Easy to install—heavy gauge steel, electric welded, 31 sizes—250 CFM to 17600 CFM.

Write today for Free Application information.

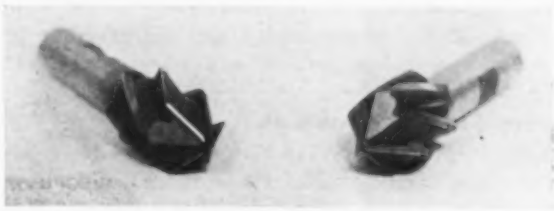
Muckle MANUFACTURING COMPANY
Owatonna 9, Minn.

For more details circle **NED-844 J4** on enclosed inquiry slip

New Processes & Materials

CUTTING TOOL RECONDITIONING for high speed steel and carbide

Sharpening and reconditioning service is available for all types of cutting tools, including both carbide and high speed steel. Grinding method used assures re-



tention of tool temper and hardness. Broken end mills, sharpened down milling cutters, worn-out counterbores and obsolete slitting saws are a few of the tools which can be quickly and economically reconditioned. Flutes are recut parabolically for maximum strength, retaining chip clearance and cutting depth, and a smooth ground finish is imparted. Service also includes manufacture of special tools from the solid or reworking from standard tools. Data are available from **Manufacturers Cutter Corp.**, Dept. ND, 275 Jefferson St., Newark 5, N. J.

For more details circle **NED-845 J4** on enclosed inquiry slip

RUST INHIBITOR is water-soluble compound

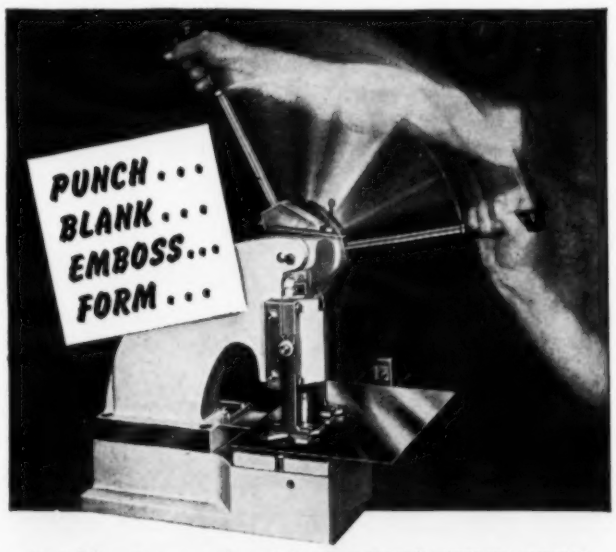
Metal rusting during or after water washes or hydrostatic testing is prevented by rust inhibitor Q. This white crystalline compound is dissolved in water. Parts which have been in contact with water treated with the chemical are given an invisible film after air drying which protects them from rust between machining or assembly operations. Made by **Nox-Rust Chemical Corp.**, Dept. NED, 333 N. Michigan Ave., Chicago 1, Ill.

For more details circle **NED-846 J4** on enclosed inquiry slip

SNOW PLOW WAX contains rust inhibitor

Either brush or spray can be used to apply Snow-Rem liquid snow plow wax which has a high Carnauba wax content. It also contains Speconite rust inhibitor and a silicone additive that produces an extra slippery surface coating. Wax is available in 1 and 5-gallon cans and 55-gallon drums. Made by **Speco, Inc.**, Dept. RSA, 7308 Associate Ave., Cleveland 9, O.

For more details circle **NED-847 J4** on enclosed inquiry slip



Quickly, Accurately with DI-ACRO* PUNCH PRESS

Deep throats—6 and 12 inches—of Di-Acro Punch Presses make them ideal for many operations impossible to perform on most bench presses.

Holes of various shapes and sizes—as large as 4" in diameter in 16 gauge steel—can be punched. Rated capacity, 4 tons. Also power models.

A wide variety of readily interchangeable punch press accessories are available for both production and experimental work. Punches are offered in round, square, rectangular and oval shapes.

*pronounced Die-ack-ro

SEND FOR 32-PAGE CATALOG
Creators of "Die-Less Duplicating"

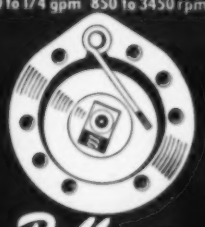
O'NEIL-IRWIN MANUFACTURING CO.
354 8th AVENUE • LAKE CITY, MINN.

di-acro PRECISION METALWORKING MACHINES

For more details circle **NED-848 J4** on enclosed inquiry slip

Are you pumping $$ into wrong pump sizes?

Pioneer
IMPELLER TYPE PUMPS
(0 to 174 gpm 850 to 3450 rpm)



Rollway
POSITIVE DISPLACEMENT LUBRICANT PUMPS
(1 pt. to 60 gpm 200 to 500 rpm)

Over 400 models of standard PIONEER and ROLLWAY pumps to choose from. Thus you can be sure of exactly the right pump for your job . . . capacity-tested at the factory. No need to pay extra for capacities not needed.

To save on pump costs, power costs, maintenance costs, installation costs and space, ask for complete Manual and Catalog #43.

Headquarters
14300 Tireman
Detroit 28, Mich.
(FACTORY Paris, Kentucky)

DETROIT HARVESTER Co
PIONEER PUMP *Division*

For more details circle **NED-849 J4** on enclosed inquiry slip

Hoffman Vacu-matic Filter principle permits 4 times faster coolant clarification

This effective new automatic, self-cleaning filter is designed for individual machine tools using soluble oil coolants . . . is four times faster than any system relying on gravity alone.

Coolant is kept at or below shop temperature to prolong tool life and maintain tolerances. *Flow rate is constant no matter what soluble coolant is used.*

Here is the sure way to cut downtime because the Vacu-matic cleans itself, delivers near-dry sludge in tote box for easy removal.

Get these tremendous savings:

Man-hours: The Vacu-matic needs no maintenance.

Production costs: The Vacu-matic eliminates machine downtime, lengthens tool life, keeps productive labor at productive jobs. Keeps coolant cool to make close tolerance work easier.

Quality control: More uniform precision parts since vacuum principle maintains coolant temperature at near ambient.

Space: Modern-design, compact unit occupies less floor space than gravity filters.

Choose from HOFFMAN'S two new units with flow rates of 20 and 40 G.P.M. WRITE for Bulletin A-915.

HOFFMAN FILTRATION ENGINEERS can draw upon 10 basic types of filtration equipment to get the unit exactly suited for every filtration need–equipment that need never compromise with the requirements of the job. These units include:

CARTRIDGE, PRESSURE, DISC & PORTABLE CARTRIDGE FILTERS • FLOTATION UNITS • OIL CONDITIONERS • MAGNETIC SEPARATORS • VACUUM STILLS • VAPORIZER UNITS.

Write for Bulletin 943 which describes the entire HOFFMAN filtration equipment line.

Industrial Filtration Division
U.S. HOFFMAN MACHINERY CORPORATION
225 LAMSON ST. SYRACUSE 6, N. Y.

For more details circle **NED-850 J4** on enclosed inquiry slip

SUPER FINISH OF UNIVERSAL DRILL BUSHINGS reduces tool wear to a minimum

One sure way to cut excessive tool wear in your operations is to specify Universal Drill Bushings because their superfinish bores help reduce wear on production tools to an absolute minimum, especially in close tolerance work. The blended radius on the top inside diameter helps prevent tool hang-up and breakage. 100% concentricity and hardness tests insure accuracy, uniform high quality and long life. Knurled heads provide a quick, sure grip. Universal Drill Bushings are produced in a complete range of standard sizes and lengths. Orders for special dimensions will receive prompt attention. For complete information, write to the office nearest you—Universal Engineering Sales Co., 1060 Broad St., Newark 2, N.J.; 5035 Sixth Ave., Kenosha, Wis.—or our home office.

UNIVERSAL ENGINEERING COMPANY
FRANKENMUTH 5, MICHIGAN 171-A

For more details circle NED-853 J4 on enclosed inquiry slip

Save!
ON SWITCHES

FOR APPLIANCES, INSTRUMENTS, TOYS, RADIOS, TV SETS, SMALL MOTORS, etc.

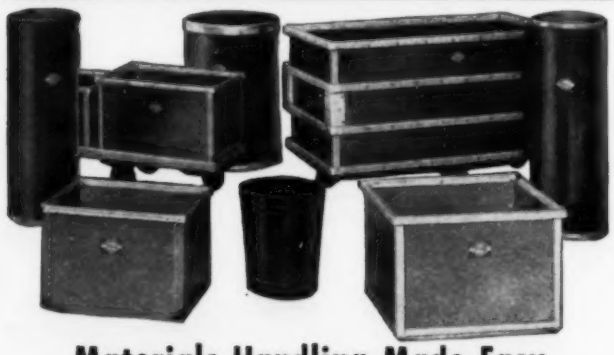
Low-priced Stackpole line switches in 22 different styles provide practically any needed switching arrangement. Types rated from .5 to 3 amperes. Underwriters approved. Write for Switch Bulletin RC-9B.

Electronic Components Division
STACKPOLE CARBON CO., *St. Marys, Pa.*

STACKPOLE

Fixed and Variable Resistors • Iron Cores • Ceramag® ferromagnetic Cores • Molded Coil Forms • Low-Value Capacitors, etc.

For more details circle NED-854 J4 on enclosed inquiry slip



Materials Handling Made Easy

Simplify the storage and handling of your materials with Spaulding Fibre Receptacles. They're tough, light weight, shock-proof, resistant to impact and abrasion, will not splinter or corrode.

The Spaulding line includes boxes, baskets, barrels, trays, and trucks of all types. Most can be made to your order in the size and weight best suited to your needs. Send coupon for catalog today.

Spaulding

SPAULDING FIBRE CO., INC., Dover, N. H.

Please send me by return mail your catalog on Spaulding's complete line of Fibre receptacles.

Name
Firm
Address
City Zone State

For more details circle NED-855 J4 on enclosed inquiry slip

New Literature & Catalogs

Transformer Catalog

Triad Transformer Corp.—More than 500 transformers, of which over 60 are new items, are listed in 28-page catalog TR-54. Featured are 11 new amplifier kits for high fidelity reproduction, expanded line of TV components, plus items in the hermetically sealed, power component, instrument power supply, filament, choke, power and audio transformer lines.

For more details circle NED-856 J4 on enclosed inquiry slip

Solving Storage Problems

Aurora Equipment Co., Equipto Div.—How to lay out storage facilities and stock rooms, plus how to survey your requirements is told in booklet "How to Solve Your Storage Problems." Best heights, aisle spaces and space arrangement for individual needs are considered.

For more details circle NED-857 J4 on enclosed inquiry slip

Steam Turbines

Elliott Co.—16-page illustrated bulletin H-22 details construction and operating features of series YR mechanical drive turbines, including specifications, other engineering data and an accessories and controls section. Five models with capacities ranging from 600 to 2000 hp make up the line.

For more details circle NED-858 J4 on enclosed inquiry slip

Protective Maintenance Coatings

David E. Long Corp.—Among protective coatings for indoor and outdoor maintenance applications detailed in 12-page illustrated catalog are vinyls, acrylics, epons, synthetic rubber, silicones, phenolics and rubber caulking compounds. Where they should be used, how to use them, surface preparation data and characteristics are included for all coatings and several types of primers.

For more details circle NED-859 J4 on enclosed inquiry slip

Variable Speed Motor Pulley

Reeves Pulley Co.—Redesigned line of Vari-Speed motor pulleys described in 28-page catalog V-545 provides eight sizes ranging from ½ to 15 hp and speed ratios as great as 4:1. Catalog presents construction details, lubrication, controls available, selection instructions, rating tables and dimensional diagrams. Also described is the Vari-Speed Jr. for light applications between ⅛ to 1½ hp.

For more details circle NED-860 J4 on enclosed inquiry slip

Grinding Machine

Cincinnati Milling Machine Co.—"X-Ray Story of Filmatic" is title of 16-page plastic bound brochure G-604 which effectively presents an "x-ray" look into design of self-adjusting spindle incorporated in the Filmatic grinding machine. Transparencies show how spindle provides both rigidity and low friction which remain constant regardless of direction or amount of load.

For more details circle NED-861 J4 on enclosed inquiry slip

***Specify* CONTINENTAL**

UST IDLERS

- UNIT-SEALED
- TIMKEN BEARINGS
- PRE-LUBRICATED

***Saves* GREASE! *Saves* LABOR! *Saves* BELTS!**

If you use belt conveyors—you need Continental Idlers!

Write for Bulletin NED-116

ALL SIZES! ALL TYPES! CG-5302

INDUSTRIAL DIVISION
CONTINENTAL GIN COMPANY
Birmingham 2, Ala.
ATLANTA • DALLAS • MEMPHIS • NEW YORK

For more details circle NED-862 J4 on enclosed inquiry slip

NO. 123 ISOMETRIC TEMPLATE

ALL THREE AXES ARE AVAILABLE WITHOUT TURNING THE TEMPLATE

.040 clear mathematical quality double cured plastic. All cut-outs are smooth-milled to give engraving-machine accuracy.

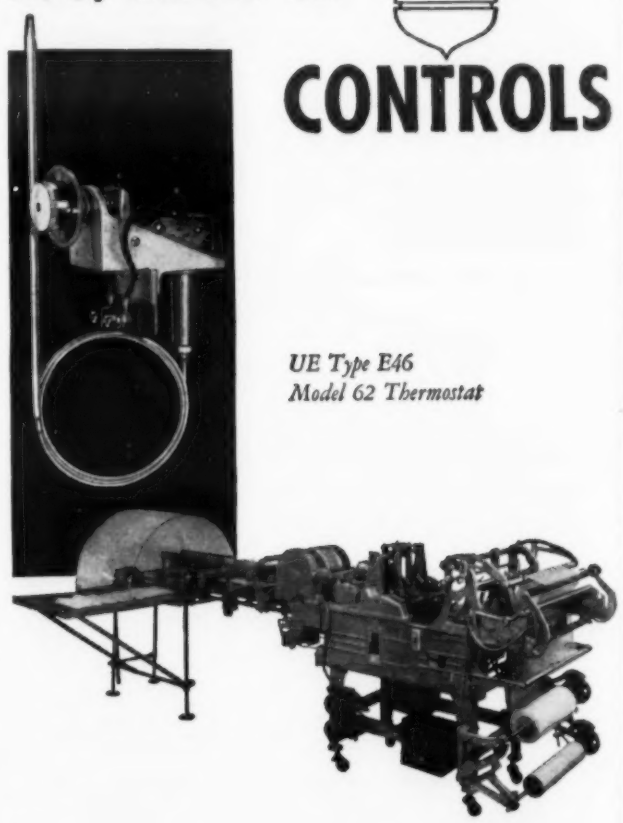
One of more than 35 Rapidesign time-saver templates—all of which are better made, more useful and lesser priced.

$3.00 AT YOUR LOCAL DEALER
CATALOG No. 50 MAILED ON REQUEST

RAPIDESIGN INC.
BOX 592 GLENDALE CALIF.

For more details circle NED-863 J4 on enclosed inquiry slip

THE PACKAGING INDUSTRY, TOO, RELIES ON UE CONTROLS



UE Type E46
Model 62 Thermostat

The development of self-service departments virtually demanded the use of transparent bags—of cellophane, pliofilm, polyethylene and similar materials. But making containers from these materials created a problem: how to seal the folds accurately, quickly and permanently?

Simplex Packaging Machinery, Inc., solved this problem with heat sealing. It developed an exclusive, adjustable stop-and-seal cycle that assures dependable sealing of every bag, no matter what type or size.

United Electric's Type E46 Model 62 Thermostat, developed especially to solve Simplex's problem, provides the critical temperature control required in this cycle. It helps eliminate pin holes and burnt spots, and assures longer, stronger seals.

United Electric manufactures a wide line of standard controls that are used in aircraft fuel purging systems, paper mill machinery, diesel engines, milk pasteurizers, room air conditioners and in countless other applications.

Special controls can be adapted from standard models, or can be custom-built by United engineers working in cooperation with your own product development engineers.

Write today for information on the complete line of United Electric controls.

Standard and special thermostats and pressure switches

UNITED ELECTRIC CONTROLS CO.
81 School Street, Watertown, Mass.

For more details circle NED-864 J4 on enclosed inquiry slip

FREE air compressor fact folders

Get the low-down on air compressors — ask today for these new fact folders.

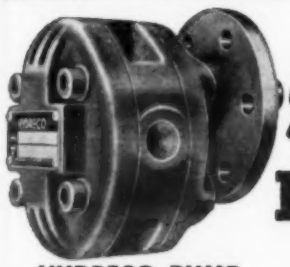
They tell you all about air compressors — how to select them, how to care for them and how to put them to work at new and different jobs.

Write to Worthington Corporation, Section PC. 4.13B, Merchandising Division, Harrison, N.J.

PC.4.13

WORTHINGTON

▲ For more details circle NED-865 J4 on enclosed inquiry slip ▲



HYDRECO PUMP

Get the Facts on HYDRECO Oil Power!

WHAT KEEPS HYDRAULIC PUMPS AND MOTORS "ON THE JOB" DAY IN AND DAY OUT?...See Bulletin 139!

It takes more than pressures, speeds and capacities to keep equipment performing dependably, economically and when you want it. The invisible factors that do not appear in the specifications make the deciding difference in hydraulic controls. It is these PLUS factors that keep HYDRECO PUMPS and MOTORS on America's leading hydraulically-equipped Materials Handling, Earth Moving and Industrial Machinery.

HYDRECO MOTOR

Write –

Bulletin No. 139 has the facts you want to know about HYDRECO Pumps and Motors.

HYDRECO DIVISION
THE NEW YORK AIR BRAKE COMPANY
1108 EAST 222nd STREET • CLEVELAND 17 • OHIO

▲ For more details circle NED-866 J4 on enclosed inquiry slip ▲

For faster work at less cost–

M & T's New D.C. Rectifier Welder

INSTANT ARC
STABLE ARC
STEPLESS CURRENT CONTROL
SILICONE INSULATION
LESS WORKER FATIGUE

This 400 amp selenium rectifier is a standout in M & T's complete line of Welding Machines, Murex Electrodes and M & T Accessories. Write today for full information, or advice on any welding problem.

METAL & THERMIT CORPORATION
100 East 42nd Street, New York 17, N. Y.
MUREX ELECTRODES • ARC WELDERS • ACCESSORIES

▲ For more details circle NED-867 J4 on enclosed inquiry slip ▲

New Processes & Materials

ROOF MAINTENANCE KITS for complete resurfacing or repair

All materials and tools for roof maintenance can now be procured in packaged units. The G-C package for roof resurfacing includes one roll of Glasfab roofing membrane 45 in. wide by 144 ft long, 20 gal of Fibrated roof coating, one rubber squeegee and one roofing brush. Membrane in this package covers 500 sq ft, including 2-in. lap. G-P package for roof repair is made up of one 9-in. x 150-ft. roll of Glasfab, 5 gal of Plastic cement and one steel trowel. Coverage with this package is 110 sq ft. Membrane is open-mesh glass fiber fabric which will not char, rot, burn or become brittle. Both roof coating and plastic cement will give over 10 years of watertight protection. Packages offered by **Lexsuco, Inc.**, Dept. N, 4815 Lexington Ave., Cleveland 3, O.

▲ For more details circle NED-868 J4 on enclosed inquiry slip ▲

MOLDED FIBERGLAS suitable for variety of products

Shipping containers for electronic tubes, baffles for air conditioning units, chemical filters and automobile instrument panels are among the many uses of molded or high-density Fiberglas. Product is almost 100 per cent glass with only a small amount of binder to give structural integrity after curing. Material will not rot, burn, absorb moisture, shrink or stretch. It has thermal and acoustical insulating properties and structural strength and rigidity. It can be made in densities up to 20 lb per cubic foot, at which point it bears a resemblance to wood. Curing cycles are from 20 seconds up to several minutes. Made by **Owens-Corning Fiberglas Corp.**, Nicholas Bldg., Toledo 1, O.

▲ For more details circle NED-869 J4 on enclosed inquiry slip ▲

"SHADE"

Remarkable Vinylite Sheeting that ABSORBS Heat and Glare

SHADE will never become brittle or crack even in temperatures from —25 to 150 F. All you need is a squeegee, a bucket of water, and some pieces of factory pre-cut SHADE to eliminate glare and heat. Easy to apply, permanent and washable, SHADE is custom cut to fit your windows—Order yours today!

The unfiltered rays of the sun, even on a cloudy day, can be a major cause of fatigue. SHADE is a specially formulated compound to filter light!

NO MORE PAINTING
No need for repeated painting of glass surfaces: with SHADE you have an easily applied filter, bonded to the glass. It won't crack or grow brittle.

EASY TO APPLY
Application requires no special skill or tools. It is pre-cut at the factory. Wet, place polished side to glass, squeegee out excess water.

PERMANENT
Following out this procedure will effect a permanent bond. SHADE will never come off until you pry up a corner and strip it off yourself.

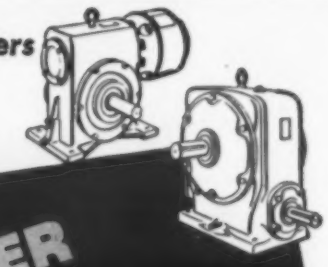
WASHABLE
Can be washed like regular glass. If you wish to remove it, a quick washing in warm water will restore its adhesiveness.

COLOR CHOICES
Colors are available in FROSTED TRANSLUCENT, ARCHITECTURAL BLUE, TRANSPARENT BLUE, FILTERED WHITE, OLIVE GREEN, TRANSLUCENT GREEN and BLACK-OUT BLACK.

TRANSEAL, Ltd.
Dept. NED, 100 Oak Tree Ave., South Plainfield, N. J.
Telephone PLainfield 6-3800

▲ For more details circle NED-870 J4 on enclosed inquiry slip ▲

How cost-wise buyers rate **SPEED REDUCERS**



BETTER BOSTON Gear

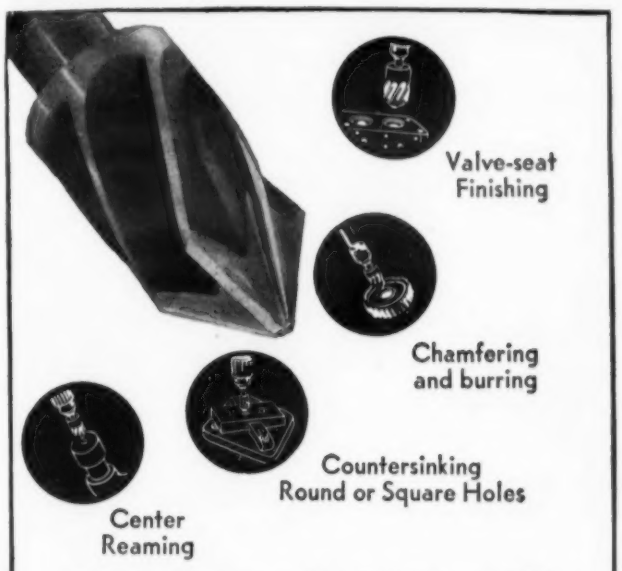
REDUCTORS AND RATIOMOTORS

IN STOCK AT 92 BOSTON GEAR DISTRIBUTORS at Factory Prices

Look under "Gears" in the Yellow Classified Section of your Telephone Directory for the one nearest you.

Get the 384-page BOSTON Gear Catalog . . . industry's most valued "textbook" of drive design and maintenance. Ask your BOSTON Gear Distributor, or write Boston Gear Works, 69 Hayward St., Quincy 71, Mass.

▲ For more details circle NED-871 J4 on enclosed inquiry slip ▲



4 jobs better with 1 basic tool!

FORD "Quad"

HSS chatterless countersink

Ford's exclusive job-engineered flute design, precise concentricity, greater rigidity, lower cost add up to faster production, better production, more profitable production. No secondary burs. Ideal for heavy duty applications. Write for details.

FORD "standard"

chatterless countersink

Engineered by Ford for peak operating efficiency commensurate with lowest possible initial tool cost. Ford's know-how makes possible a competitively priced tool without sacrifice of performance.

FORD -- *the complete line!*

HSS ground cutters, rotary files, countersinks
CARBIDE cutters, end mills, grinding burs

Complete Details, Operating Data

All specifications plus informative operational data on more than 300 FORD rotary tools contained in new FORD Catalogue No. 207. Write for yours!

FORD regrinding service adds tool life, reduces tool costs!

M. A. FORD MFG. CO., INC.
Pioneers in rotary tools for more than 30 years
721 West River St., Davenport, Iowa

▲ For more details circle NED-872 J4 on enclosed inquiry slip ▲

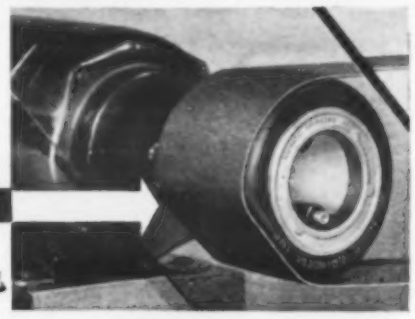


Photo shows plate glass pushed against resilient air-inflated wheel. Note large abrasive contact area—up to 3000% more! This means a corresponding production increase.

...how to INCREASE BUFFING, POLISHING PRODUCTION 3000%

● You can boost your buffing and polishing output up to 3000% on flat work ...and 600 to 700% on contours... by using this resilient air-inflated wheel. Many other advantages such as—*no chatter or bounce... eliminates under-cuts . . . produces a straight pattern similar to a hand finish.* For use on portable tools or bench-stands—wherever ordinary polishing wheels are used. Send NOW for free literature and name of distributor nearest you. Nu-Matic Grinders, Inc., 8223 Carnegie Ave., Cleveland 3, Ohio.

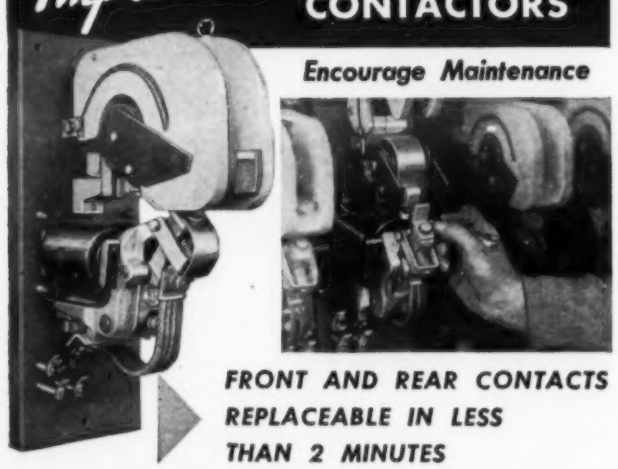
send for full information TODAY!

NU-MATIC Air-Inflated GRINDERS

▲ For more details circle NED-873 J4 on enclosed inquiry slip ▲

Improved EC&M LINE-ARC CONTACTORS

Encourage Maintenance



FRONT AND REAR CONTACTS REPLACEABLE IN LESS THAN 2 MINUTES

The LINE-ARC principle gives long contact-life, but when necessary, contacts are easily accessible for quick renewal—no other parts need be removed first. And a standard wrench permits good leverage for loosening and tightening operations. *It pays to encourage maintenance.*

WRITE FOR BULLETIN 1145

THE ELECTRIC CONTROLLER & MFG. CO.
2698 EAST 79TH STREET • CLEVELAND 4, OHIO

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NEW CATALOG OF WELDING FACILITIES

Twenty-four page booklet describing American Welding facilities that are available to you. Lists welding, machining and fabricating equipment and services available to manufacturers. Photographs of plant indicate American Welding's capacity and wide versatility.

Write for free copy.

The American Welding & Manufacturing Co.
170 DIETZ ROAD • WARREN, OHIO

▲ For more details circle NED-875 J4 on enclosed inquiry slip ▲

New Literature & Catalogs

Portable Lighting & Tool Lines

Joy Mfg. Co.—String-a-lite portable lighting and tool lines for aviation, construction, industry, railroad and marine application are subject of 12-page bulletin B52. Assemblies consist of suitable end connectors and molded neoprene outlets, factory molded into 50 or 100-ft sections of standard rubber-covered cord.

▲ For more details circle NED-876 J4 on enclosed inquiry slip ▲

Concrete Tensioning Materials

John A. Roebling's Sons Corp.—16-page catalog "Tensioning Materials for Prestressed Concrete" charts the characteristic properties of wire and strand. Descriptions and photographs of various construction jobs in which prestressing has been used are included.

▲ For more details circle NED-877 J4 on enclosed inquiry slip ▲

Component Electrical Parts

General Electric Co., Trumbull Components Dept. —100-page component parts catalog GEC-1025 affords complete information on circuit breakers, disconnect switches, open knife switches and component parts used in switchboards and panelboards. Over 2500 catalog numbers are listed. Manual includes descriptions, prices and dimensional drawings on majority of products.

▲ For more details circle NED-878 J4 on enclosed inquiry slip ▲

Sprockets & Roller Chain

Dodge Mfg. Corp.—Information contained in 4-page bulletin A-632 covers technical data and prices on all items in newly extended Taper-Lock line which now includes sprockets and chains for sizes from 40 through 160. Pitch range is from ½ through 2 in. Both riveted and cottered chains and roller chain pin extractors are covered.

▲ For more details circle NED-879 J4 on enclosed inquiry slip ▲

Heavy Duty Upright Drills

Western Machine Tool Works — Three 18-speed heavy duty upright drills are descriptively covered in 12-page catalog 5415. Drills are made in capacities of 1¼, 1½ and 1¾-in. in cast iron and in one, two or three-spindle sizes. They are also made in single spindle, round column and table types.

▲ For more details circle NED-880 J4 on enclosed inquiry slip ▲

Riveting Tools

Hi-Shear Rivet Tool Co.—Changes made in 24-page sixth edition of the rivet tool catalog include part numbers assigned to all Hi-Shear tools to simplify processing of orders. Tool sets for driving ⅛ and 5/32-in. diameter rivets and for installing Hi-Torque bolts are now included in catalog. Rivet sets, bucking bars, rivet removal tools and surface flushness gages are shown as in previous editions.

▲ For more details circle NED-881 J4 on enclosed inquiry slip ▲

"WOVEN-Gards"

BETTER HAND PROTECTION

at amazing low cost

"Woven-Gards" are hand protectors, mitts, pads, sleeves and aprons made of a long wearing woven cotton safety material. Provide flexibility, comfort, resistance to abrasion and cutting. Highly oil absorbent. Excellent for handling oily, slippery sheets. Porous weave makes them the finest protector for handling lower temperature jobs. Excellent protection at lowest cost. We manufacture a complete line of industrial safety apparel. Write for free catalog with price list.

INDUSTRIAL GLOVES COMPANY, 1521 Garfield Street, Danville, Illinois
A Corporation
(In Canada: Safety Supply Co., Toronto)

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200 MILLION count life

Wear Defying

Stay on the Job Millions of Counts Longer

Increased dependability. Greater long run accuracy. Reduced upkeep costs. No wonder progressive cost-conscious plants are switching to Silver Kings.

Built rugged as a bulldozer, Silver Kings operate smooth as a watch. Extra heavy shaft, oversize bearings, life tested parts, all-steel housing, chrome plated finish.

Available in Stroke and Revolution types, top-coming or top-going action, 5 or 7 digits, right or left shaft, knob or key reset.

SEE—COMPARE—TEST. Ask your PIC Representative or write.

Complete Catalog mailed on request.

PRODUCTION INSTRUMENT COMPANY
700-12 W. Jackson Blvd., Chicago 6, Ill.

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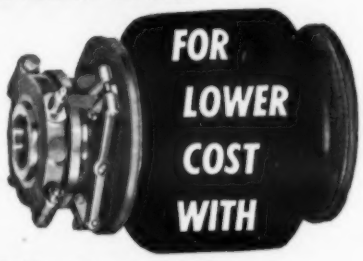
DESIGN



FOR LOWER COST WITH

ROCKFORD CLUTCH engineers are helping product designers reduce costs — by making possible *quicker clutch installation, easier clutch adjustments,* and reducing *after-sale service* to a minimum. Because ROCKFORD CLUTCH precision, capacity and stamina are greater than ever, product owners' up-keep costs are lower. Now is the time to have ROCKFORD clutch engineers give *your* product the benefit of lower clutch cost plus competitive operating advantages.

Send for This Handy Bulletin

Shows typical installations of ROCKFORD CLUTCHES and POWER TAKE-OFFS. Contains diagrams of unique applications. Furnishes capacity tables, dimensions and complete specifications.

ROCKFORD CLUTCH DIVISION
BORG-WARNER
312 Catherine Street, Rockford, Illinois

ROCKFORD CLUTCHES

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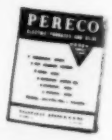
Proved So Good
—they're bought in batteries

PERECO *Electric* **FURNACES**

Standard or Special Units from 450° to 5000° F. for laboratory, pilot plant or production. Prepared to tackle the toughest problem!

This Pereco aluminum bar furnace was especially designed for a customer's need—and proved so good it was reordered in quantity. What's a better recommendation? Duplicate experiences explain why leading firms everywhere depend on Pereco for their furnace and kiln needs. They know they can depend on Pereco "know-how" and construction quality.

Write Today for



Get-acquainted Bulletin

PERENY EQUIPMENT CO.
Dept. G,
893 Chambers Road
Columbus 12, Ohio

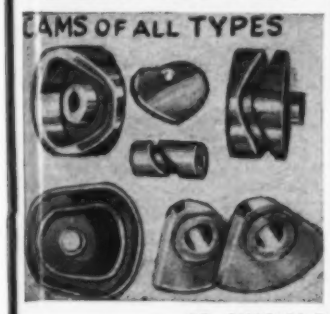
PERENY EQUIPMENT COLUMBUS OHIO

▲ For more details circle NED-885 J4 on enclosed inquiry slip ▲

TURNTABLES AND POSITIONERS over 100 different types for welding, brazing, soldering, spraying, glass insulator melting and glass glazing, with rotating stations and indexing with barrel cam or geneva gear action. For work transferring, tilting positions, motorized or hand operated. Rotating tables of all kinds for over 33 years. Many types made by EISLER. We supply any part or complete equipment and we make special turntables to your order. Write for catalog.

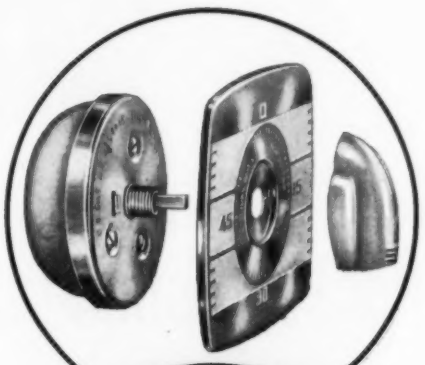
Eisler Indexing Turntables are Completely Electrically Controlled.

CAMS
MADE TO YOUR SPECS.



DR. CHARLES EISLER, M. E., PRES.
EISLER ENGINEERING CO. INC., 740 S. 13TH ST., NEWARK 3, N. J.

▲ For more details circle **NED-886 J4** on enclosed inquiry slip ▲



MARK-TIME
"2000" Bell Timer
a favorite for dependability & economy!

Hundreds of the country's leading manufacturers of ranges, washing machines and similar appliances have standardized on "2000" . . . because no other bell timer gives such rugged dependability at so little cost!

"2000" is perfect for any device or appliance where a clear, resonant bell signal is required at the end of a pre-set, measured time interval.

Durability is built into "2000" . . . its simple, trouble-proof operation has earned its outstanding popularity.

Available with a wide variety of modern dials and knobs. Write today for full details and prices.

SPECIFICATIONS

Standard timing ranges from 60 seconds to 5 hours. Normally supplied with center stud mounting. Other mountings available on request. May be supplied with winding shafts of various types.

Manufactured and sold in Canada by SPERRY GYROSCOPE OTTAWA, Limited 3 Hamilton St., Ottawa, Ontario, Canada

MARK-TIME

M. H. RHODES, INC.
HARTFORD, CONNECTICUT

▲ For more details circle **NED-887 J4** on enclosed inquiry slip ▲

New Processes & Materials

RUST PREVENTIVE
in self-spray pressurized can

Natural lubricant and a rust inhibiting ingredient comprise No-Rust preventive, offered in pressurized spray can. Product preserves metal from rust, lubricates moving parts and penetrates inaccessible places with blanketing spray. It can be used on tools, tractors, machinery and marine tackle. Made by **Lenk Mfg. Co.,** 31 Cummington St., Boston 15, Mass.

▲ For more details circle **NED-888 J4** on enclosed inquiry slip ▲

RUBBER HOSE
safely conducts concentrated acids

Both suction and discharge rubber hose in wide variety of sizes is available for safely conducting concentrated acid solutions without deteriorating effects. Sulphuric acid 66 degrees baume, 70 per cent hydrofluoric acid, concentrated chromic acid and concentrated nitric acid can be handled by this hose. The new tube compound can be used in any of company's line of acid hose. Made by **Lee Rubber & Tire Corp.,** Republic Rubber Div., 500 Albert St., Youngstown 1, O.

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METAL EXTRUSIONS
complex parts can be produced

Magnesium, aluminum, tin, copper and the alpha brasses are among the materials which can be successfully impact-extruded into complex or simple

parts. Process is a combination of hot or cold forging and conventional extrusion. It results in desirable wrought metal characteristics and near-maximum physical properties. It is also reported to give comparatively low tool and die costs with high production and low scrap losses. Process facilities for production of up to 2½-ft long extrusions are offered by **Magnesium Co. of America,** Light Metals Fabrication Div., Dept. N, East Chicago 19, Ind.

▲ For more details circle **NED-890 J4** on enclosed inquiry slip ▲

Cuts Pump Maintenance Costs

MORRIS TYPE R SLURRY PUMP

REMOVE 4 BOLTS

. . . and there's the impeller!

Without disturbing the suction, the discharge piping or the bearings, you can inspect, unclog or remove the impeller on the Morris Type R Slurry Pump. Simply loosen 4 *outside* clamping bolts and pull off the end cover. Cuts maintenance costs and lay-up time to a bare minimum by getting the pump back in service quicker.

The Morris Type R Slurry Pump offers many other features you'll appreciate. Write for specifications, capacities, performance charts and other helpful information. Ask for Bulletin 181.

MORRIS MACHINE WORKS
Baldwinsville, N. Y.
Representatives in Principal Cities

MORRIS *Centrifugal Pumps*

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THE TWIN TUBE POCKETSCOPE BY WATERMAN

MODEL S-15-A

Wt. 16¼ lbs.
12" x 6" x 7"

A new concept in multiple trace oscilloscopy made possible by Waterman developed RAYONIC rectangular cathode ray tube, providing for the first time, optional screen characteristics in each channel. S-15-A is a portable twin tube, high sensitivity oscilloscope, with two independent vertical as well as horizontal channels. A "must" for investigation of electronic circuits in industry, school, or laboratory.

Vertical channels: 10mv rms/inch, with response within —2DB from DC to 200kc, with pulse rise of 1.8μs. Horizontal channels: 1v rms/inch within —2DB from DC to 150kc, with pulse rise of 3μs. Non-frequency discriminating attenuators and gain controls, with internal calibration of traces. Repetitive or trigger time base, with linearization, from ½cps to 50kc, with ± sync. or trigger. Mu metal shield. Filter graph screen. And a host of other features.

WATERMAN PRODUCTS CO., INC. PHILADELPHIA 25, PA.
CABLE ADDRESS: POKETSCOPE

WATERMAN PRODUCTS INCLUDE:

S-4-A	SAR	PULSESCOPE
S-5-A	LAB	PULSESCOPE
S-10-B	GENERAL	POCKETSCOPE
S-11-A	INDUSTRIAL	POCKETSCOPE
S-14-A	HIGH GAIN	POCKETSCOPE
S-14-B	WIDE BAND	POCKETSCOPE

Also RAKSCOPES, LINEAR AMPLIFIERS, RAYONIC TUBES and other equipment

WATERMAN PRODUCTS

▲ For more details circle **NED-892 J4** on enclosed inquiry slip ▲

POR-ROK (POUR ROCK) **Fast Setting Cement**

PERMANENTLY ANCHORS BOLTS IN CONCRETE WITHIN 30 MINUTES!

Securely fastening machinery, hand rails, seats, fixtures or any type of equipment to concrete by means of anchor bolts can now be done quickly, easily and safely with Por-Rok Quick Setting Cement.

Por-Rok successfully replaces lead and sulphur, and costs considerably less. Applied cold, there is no heating hazard. Simply mix Por-Rok powder with water and pour around bolt. Within 30 minutes the cement sets hard and the bolt is anchored permanently.

Por-Rok also makes quick, lasting repairs to holes and breaks in concrete floors with little or no interruption to normal traffic. It is self-bonding, self-leveling, oil-resistant, does not shrink. Compression strength of 4500 lbs. p.s.i. in one hour GUARANTEED.

For complete information—without obligation—write

THE HALLEMITE MFG. CO.
2452 WEST 25th ST. • CLEVELAND 13, OHIO SINCE 1927

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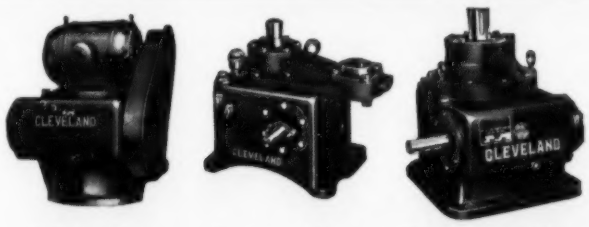


Agitator drive — Conveyor drive — Cooling tower drive

You can solve special problems with special CLEVELAND drives

LEFT: Available space dictated design of this Cleveland worm gear agitator drive for a chemical company. Top gear shaft clamping plate serves as adjustable base for motor.

CENTER: Worm gear unit for overhead conveyor drive. Standard housing is augmented by an overarm to support and maintain alignment in an auxiliary set of spur gears.

RIGHT: Special adaptation of Type NU vertical unit designed for "dry" cooling tower operation. "High hat" construction provides additional bearing load capacity as well as fan blade clearance above motor.

Write for Catalog 400 for data on special units as well as on the complete Cleveland line. The Cleveland Worm and Gear Company, 3283 East 80th St., Cleveland 4, Ohio.

CLEVELAND WORM GEAR *Speed Reducers*

Affiliate: The Farval Corporation, Centralized Systems of Lubrication

▲ For more details circle **NED-894 J4** on enclosed inquiry slip ▲

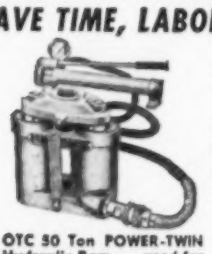
PULL SPROCKETS IN MINUTES

WITH THE NEW OTC SPROCKET PULLER

Pulling International TD-24 sprocket with OTC 50 Ton Set.

OTC 50 TON Hydraulic Ram with Adaptors pulls or installs on the job or in the shop.

SAVE TIME, LABOR... REDUCE "DOWN-TIME"



OTC 50 Ton POWER-TWIN Hydraulic Ram... used for hundreds of tough jobs including the above.

Now the costly job of pulling Crawler-Tractor sprockets can be done in minutes by one man. Manufacturers approved sets are available for, Caterpillar, Allis-Chalmers and International Harvester . . . or a Universal Set to fit all three. If you have a 50 Ton OTC Ram, you need only the adaptors . . . three types of pumps available.

SEND FOR FREE FOLDER

OWATONNA TOOL COMPANY
436 Cedar Street • Owatonna, Minnesota

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Schrader Pilot Valves for Remote Control of Air Systems

From any convenient spot, you can actuate air equipment by means of a Schrader Pilot Valve. Simply install in the main supply line at the point of operation, and add a small actuating valve at the point of control.

Pilot valves are available in two- three- or four-way types, and can be supplied with timers to deliver air from a fraction of a second to as many as desired.

The Schrader catalog gives complete information on pilot valves, as well as the full Schrader line of air operated products. Write for it today.

A. SCHRADER'S SON
Division of Scovill Manufacturing Company, Incorporated
459 Vanderbilt Avenue Dept. E-43 Brooklyn 38, N. Y.

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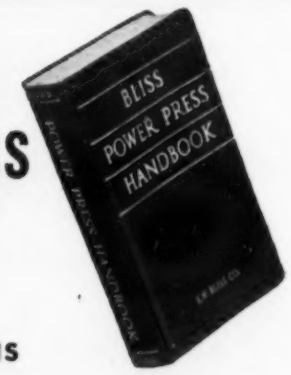
THE BLISS POWER PRESS HANDBOOK



700 PAGES
400 ILLUSTRATIONS

Need a hand with press problems? Reach for the Bliss Power Press Handbook—more than 10,000 others already have. It's a handy and authoritative reference of data for engineers, production executives and trainees.

Sections cover press job computations • proper die selection • engineering tables • die illustrations • service instructions for Bliss presses • complete glossary • and an index. "One or several are needed in every stamping shop," says *American Machinist*.

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Rush me a copy of the Bliss Power Press Handbook
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▲ For more details circle NED-899 J4 on enclosed inquiry slip ▲

New Literature & Catalogs

Grinding Wheels

Chicago Wheel & Mfg. Co.—All types of grinding wheels, flex wheels and break resistant cut-off wheels are described in well-indexed plastic-bound reference book. Proper operating speeds for all types of grinding wheels are given in tables. Data on accessories are also provided.

▲ For more details circle NED-900 J4 on enclosed inquiry slip ▲

Industrial Ovens

Newcomb-Detroit Co.—Subjects covered in 16-page illustrated bulletin D-53-20 on industrial process ovens include manufacturing and installation, types, applications, source of heat, selection of heaters, control of heat and distribution of heat. Typical installations are shown.

▲ For more details circle NED-901 J4 on enclosed inquiry slip ▲

Hydro-Pneumatic Boosters

Sciaky Bros., Inc.—Designed for operation with water, but suitable for use with oil or noninflammable hydraulic fluids are Sciaky hydro-pneumatic boosters, subject of 4-page folder 322-10. Normal plant water line or welder cooling line provides sufficient water supply. Units hold pressure indefinitely.

▲ For more details circle NED-902 J4 on enclosed inquiry slip ▲

Wiping Cloth Analysis

Charles Belsky & Sons, Inc.—Twenty-one basic types of wiping cloths are analyzed and compared with regard to their important wiping qualities in this Readywipe quality chart. Absorbency, lintlessness, softness, durability, weight of fabric, color, type of fabric, weave, shape and size are considered.

▲ For more details circle NED-903 J4 on enclosed inquiry slip ▲

Wood Products Specifications

Timber Engineering Co.—"Directory of U. S. Government Specifications for Wood Products" is a 32-page piece listing wood products and the agencies from which specifications on them can be obtained. Data have been brought up to date with the latest developments in wood product manufacture.

▲ For more details circle NED-904 J4 on enclosed inquiry slip ▲

Materials Handling Boxes

Republic Steel Corp.—20-page illustrated catalog ADV-620 covers such materials handling equipment as steel boxes, skids, pallets, foundry flasks and stampings. A collapsible steel box is one of the units featured. Design details are given.

▲ For more details circle NED-905 J4 on enclosed inquiry slip ▲

Battery Clips & Insulators

Mueller Electric Co.—Described and illustrated in 8-page catalog 150 is Mueller line of battery and test clips, insulators for clips, ground clamps, battery charging jumpers and ignition cable assemblies.

▲ For more details circle NED-906 J4 on enclosed inquiry slip ▲

NEW COMPACT POWERFUL

Quiet!

ELECTRIC VIBRATOR

To speed the flow of stubborn material from hoppers, bins and chutes of all sizes and shapes.

Obtainable in all voltage, phase and cycle requirements.

Write today for complete literature.

THE CLEVELAND VIBRATOR CO.
2744 Clinton Avenue • Cleveland 13, Ohio

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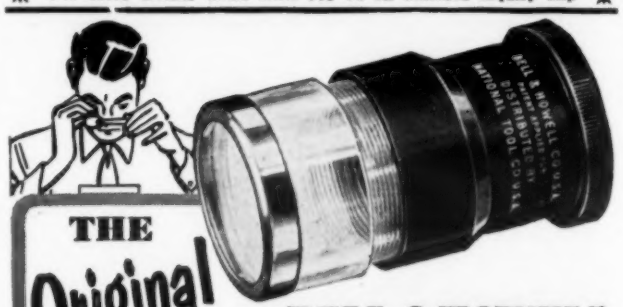
Resonant Reed Design Simplifies Transmission of a Number of Control Signals Over a Single Circuit

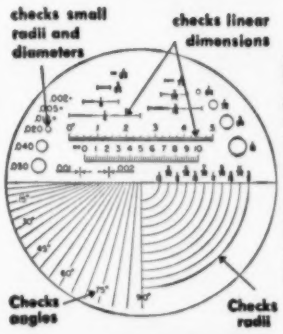
Each carbon-steel or alloy reed is tuned to vibrate to a signal frequency within a narrow range. Several Frahm® Resonant Reed Relays may be operated simultaneously on a single control circuit by employing an equal number of source generators designed so that no operating frequencies overlap. In the 200-500 cycle range 16 channels can be used on one circuit without interference. Frahm Relays may be used with all types of communication circuits including radio and carrier systems as well as wire circuits. Correspondence invited. Also available: **Frahm Oscillator Controls Bulletin 34-EQ.**

JAMES G. BIDDLE CO.
Electrical & Scientific Instruments
1316 ARCH STREET, PHILADELPHIA 7, PA.

▲ For more details circle NED-908 J4 on enclosed inquiry slip ▲



THE Original BELL & HOWELL Pocket Comparator



Saves time and money inspecting small dimensions

● Here's *guaranteed* accuracy in checking small dimensions at a price any business can easily afford. Save time and money measuring wear on cutting tools, checking forms and dimensions of punches, dies and gauges—as well as chamfers, threads and small holes on production parts.

Thousands in use by America's leading precision manufacturers. It's the greatest time-saver since the micrometer!

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Write for FREE descriptive folder

▲ For more details circle NED-909 J4 on enclosed inquiry slip ▲

for clear, accurate NAME PLATE MARKING

WAGNER DISTRIBUTION TRANSFORMER

For complete details on the Automark, the world's only metal marking electric typewriter, WRITE TODAY for Bulletin 8-16.

"Its accuracy and the uniform clearness of the marking are the features that make it superior to the method previously used," say officials of Wagner Electric Corporation, St. Louis, about the Automark.

This unique detail marking machine employs a standard typewriter keyboard. Light touch on key produces mark by instantaneous electrical response. Production speeded, operator fatigue lessened. Heavy-duty table. Wide range of plate size and thickness. Type sizes from 3/16" to 3/4".

DEFIANCE MACHINE & TOOL COMPANY
1928 South Vandeventer Ave. • St. Louis 10, Mo.

▲ For more details circle NED-910 J4 on enclosed inquiry slip ▲

Sturtevant

MICRONIZER* GRINDING MACHINE

Reduces Solids to Micron Sizes

The new Sturtevant *Micronizer* grinding machine is a fluid jet grinder especially designed to reduce solid materials to particle sizes in the micron ranges.

Sturtevant *Micronizers* are used for simultaneous dry grinding and classification of solids. The variety of materials that can be processed is large and includes both metallic and non-metallic minerals and ores, metals, pigments, insecticides, fungicides, pharmaceuticals, plastics, dyes and numerous other organic and inorganic products. Available in capacities from ½ to 3000 pounds per hour.

*Micronizer is the Registered Trademark of the Sturtevant Mill Co.

STURTEVANT MILL COMPANY
114 CLAYTON STREET, BOSTON 22, MASSACHUSETTS
Designers & Manufacturers of:
DENS AND EXCAVATORS • MIXERS • SCREENS • PULVERIZERS
ELEVATORS • AND COMPLETE FERTILIZER UNITS

For more details circle NED-911 J4 on enclosed inquiry slip

New! Incomparable!

dyna-trol
ELECTRIC FURNACES

COMPARE THESE FEATURES

- Infinite Zone Control to 2000° and 2300°F
- Zone temperature indication by Pyrometer Selector Switch
- Porcelain Element Holders
- Automatic Hold and Cut-off instrument available
- Infinite Variety of Time-Temperature Curves Obtainable
- Rugged Construction. Highest quality insulation used.

COMPARE THESE PRICES

Firing chamber (H. W. D.)	Semi-Auto. prices	Auto. prices
6"x12"x12"	$295.	$432.
12"x12"x12"	$405.	$550.
9"x 9"x18"	$480.	$625.
14"x14"x14"	$525.	$680.
20"x20"x20"	$975.	$1140.
18"x18"x36"	$1125.	$1375.
(To 2000° Maximum Temp.)		

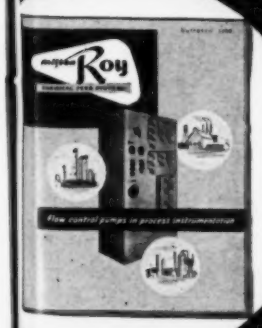
Over 40 Standard Models — Write for complete literature

L&L INDUSTRIAL DIVISION
MANUFACTURING CO.
Chester 6, Pa.

Some Territories Available For Representation

For more details circle NED-912 J4 on enclosed inquiry slip

Process Instrumentation with MILTON ROY CONTROLLED VOLUME PUMPS



NEW BULLETIN 1253

Write for your copy, TODAY!

This New Bulletin describes completely the application of Controlled Volume Pumps to chemical feed and instrumentations systems.

- describes many types of Controlled Volume Pumps with operation and selection data.
- details 25 flow diagrams of typical instrumentation systems.

MILTON Roy COMPANY
1304 E. MERMAID LANE
PHILA. 18, PA.

CONTROLLED VOLUME PUMPS ARE FLOW CONTROL INSTRUMENTS

For more details circle NED-913 J4 on enclosed inquiry slip

New Processes & Materials

SPRAY BOOTH COATING
permits overspray to be peeled off

Sprayed on spray booth wall surfaces, white Vincote vinyl coating dries fast to a tough film and permits overspray to be peeled off quickly and easily. Its

color provides good visibility for working, and it provides a poor base for combustion. Easily applied, coating need not be stirred or agitated before use and covers 250 to 400 sq ft per gallon depending on thickness desired. Good spreading qualities eliminate pinholes in the coating. Made by **Detrex Corp.**, P. O. Box 501-N, Detroit 32, Mich.

For more details circle NED-914 J4 on enclosed inquiry slip

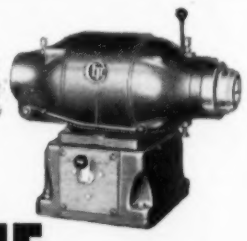
VINYL PLASTIC FORMING
metal stamping equipment used to produce close tolerance products

Rapid forming of rigid vinyl plastic products with conventional metal stamping equipment provides a possible means of diversification for metal-working plants. Method utilizes a conveyor belt which takes the plastic sheet from a preheat oven through to a conventional metal stamping press which forms the finished shape to conform with the die design. No additional finishing operations are necessary to complete the end product.

In one demonstration, 1/20-in. high-impact Geon rigid vinyl plastic was fed under a bank of strip heaters to heat it to 260-275° F. Clutch arrangement fed it intermittently to the metal stamping press. Cycle time was 10 seconds. Standard matched molds had a clearance of 0.050-in. between core and cavity and were designed with tolerance of 0.003-in. over-all and 0.001-in. on cutting edge. Finished boxes conformed to same tolerance. Process developed by **B. F. Goodrich Chemical Co.**, Advertising Dept., 324 Rose Bldg., Cleveland 15, O.

For more details circle NED-915 J4 on enclosed inquiry slip

The Cincinnati



HOLLOW SPINDLE
SPEED LATHE

A Name Among Names that Stands for Fast, Versatile, Flexible Burring and Finishing

Regardless of what you call it — Burr Head, Reamer Driver, Burring and Reaming Machine, or Speed Lathe — the results to small parts producers is the same; satisfactory results in the form of better finishing. Hollow spindle construction means it's especially adaptable to tubing and bar stock, in a wide range of sizes. Why rob production time from make-shift, adapted machines designed and needed for other operations? The Cincinnati Speed Lathe offers a range of types, voltages, speeds and capacities. It's available for pedestal installation, too.

Quality Equipment Since 1902

Profit from the complete story. Write for Catalog 54-ZD

TRADE The Cincinnati MARK

THE CINCINNATI ELECTRICAL TOOL CO.
Division of THE R. K. LeBLOND MACHINE TOOL CO.
2698 Madison Rd., Cincinnati 8, Ohio

For more details circle NED-916 J4 on enclosed inquiry slip

"The right motor for the job!"

Here are FACTS to help select the BEST A-c. Motor for your application

SELECTION DATA
NEW FRAME AND DIMENSION COMPARISONS
PRICES
ORDERING HELPS

Write for Bulletin B-2102 B-58

RELIANCE ELECTRIC AND ENGINEERING CO.
1082 IVANHOE ROAD • CLEVELAND 10, OHIO

Sales Representatives in Principal Cities

For more details circle NED-917 J4 on enclosed inquiry slip

BUILT TO LAST...

O-M CYLINDERS
(air • hydraulic)

Designed and engineered with the user in mind, O-M Cylinders embody every essential construction and mechanical feature to assure trouble-free performance and long service.

They are built of steel with bearing surfaces of bronze—precision machined with modern equipment.

Cylinder bores are honed to a fine finish, and the hi-tensile piston rods are polished to give long life and smooth performance.

Effective O-ring static seals are backed up to prevent extrusion under high pressures. All packings are self-adjusting and are carefully selected for proper usage.

A rigid inspection at the factory is your guarantee of peak performance.

O-M Cylinders fit where others won't because O-M special interlocking mechanism eliminates bulging tie rods and end caps.

Available in a full range of sizes (1½" to 8" bores) with standard, 2 to 1 or oversize rods. *14-day delivery on most sizes.*

Write today for FREE catalog and complete set of ½ and ¼-scale templates showing all cylinders and mounting brackets.

MAIL COUPON TODAY!

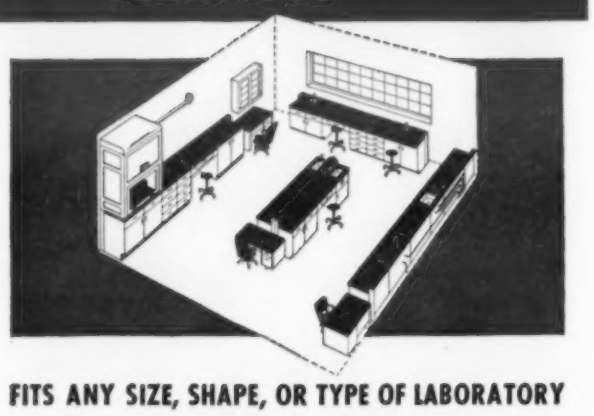
ORTMAN-MILLER MACHINE COMPANY
1222 150th Street, Hammond, Indiana

☐ Have representative call
☐ Please send latest O-M Catalog ☐ Complete Templates

Name_____ Position_____
Company_____
Address_____
City_____ Zone____ State____

For more details circle NED-918 J4 on enclosed inquiry slip

FISHER *Unitized* FURNITURE



FITS ANY SIZE, SHAPE, OR TYPE OF LABORATORY

Fisher unitized furniture is made with heavy gauge steel in a wide variety of standard stock units and accessories. Once installed, they can be just as easily dismantled and re-assembled to meet the changing needs of a progressive laboratory.

Immediate Delivery from Stock

Write for FREE Furniture Catalog FS-227-FF which shows suggested layouts and description of all furniture units.

FISHER SCIENTIFIC
717 FORBES ST. PITTSBURGH 19, PA.

▲ For more details circle NED-919 J4 on enclosed inquiry slip ▲

NEW CUTLER-HAMMER 9101 TWO-POLE MOTOR SWITCH

Better Control and Protection for All Motors up to 1 HP

Check these features and know the difference: Twin-break solid silver contacts; quick make and quick break. All mechanical operating parts are stainless steel. Famous Cutler-Hammer Eutectic Type thermal overload protection. Free-tripping; contacts cannot be held closed. Resets when switch is thrown to off position. Motor load sensing coils are fully enclosed but front removable; available for 10% loading increments.

Easiest to install and wire; removing wrap-around cover exposes mechanism completely, at front and both sides. Cover secured by single self-retained screw which cannot drop out and become lost. No annoying loose insulating baffle. Straight-through wiring; line terminals at top and load terminals at bottom . . . all clearly marked. Switch mechanism so compact it can be used in ordinary wall switch outlet box with standard toggle switch plate. Ideal for flush mounting on wall, panel or in machine cavity. Your Authorized Cutler-Hammer Distributor stocks both single pole and two-pole models of the new C-H 9101 Motor Switch. Order today and see the difference. CUTLER-HAMMER, Inc., 1377 St. Paul Ave., Milwaukee 1, Wisconsin. Associate: Canadian Cutler-Hammer, Ltd., Toronto.

EASY TO WIRE
Removing wrap-around cover opens switch at front and both sides.

OPEN TYPE 9101
Ideal for flush mounting on wall, on any panel or in a machine cavity.

CUTLER-HAMMER

CUTLER-HAMMER MOTOR CONTROL C-H

▲ For more details circle NED-920 J4 on enclosed inquiry slip ▲

New Literature & Catalogs

Spray Painting Equipment

Binks Mfg. Co.—1100 products and accessories in line of spray painting equipment have been classified into 11 sections for fast reference in 74-page catalog 956. Tables show correct fluid and air nozzles, air requirement and needle for fluids ranging from standard paints to heavy adhesives. Hose, spray outfits, compressors, pumps, paint circulating systems, spray booths, air supply and exhaust fans and automatic finishing equipment are among many items covered.

▲ For more details circle NED-921 J4 on enclosed inquiry slip ▲

Custom Molded Parts & Packings

Stillman Rubber Co.—Facilities and products of company are described in 24-page illustrated catalog. Products include O-rings, back-up rings and hydraulic packings. Permadizing rubber-to-metal bonding process is discussed along with company's new packaging method for O-rings.

▲ For more details circle NED-922 J4 on enclosed inquiry slip ▲

Parts Handling Baskets

Wire & Iron Products Inc.—Complete line of standard and custom-engineered parts handling baskets is described in 4-page bulletin B-54. Baskets can be zinc plated or coated with neoprene or plastic. Eezy-Stak units for small parts are offered in ¼ or ½-in. flat expanded metal.

▲ For more details circle NED-923 J4 on enclosed inquiry slip ▲

Switches for Industry

Minneapolis-Honeywell Regulator Co., Micro Switch Div.—"Switches for Industry" is title of 20-page catalog 101 which covers 22 families of switches, describing 258 different switches, actuators and enclosures. Characteristics, electrical ratings and other technical data are presented to aid in selection of right unit for a particular application.

▲ For more details circle NED-924 J4 on enclosed inquiry slip ▲

Reproduction Materials & Supplies

Frederick Post Co.—A practical guide to selection and purchase of reproduction materials and supplies is this 8-page booklet "Sensitized Products." It lists dry-developed print making papers, reproduction cloths and films, semimoist direct process papers, blueprint papers and cloths, sepiatone negative and brown line papers and contact type wash-off process reproduction cloth and papers. Complete price list is supplement.

▲ For more details circle NED-925 J4 on enclosed inquiry slip ▲

Radiation Measuring Equipment

Nuclear Instrument & Chemical Corp.—40-page illustrated catalog describes line of radiation measuring equipment including scalers, count rate meters, Geiger, proportional and scintillation counters. Complete radioisotope laboratories are also shown.

▲ For more details circle NED-926 J4 on enclosed inquiry slip ▲

Great Motors from Great Britain!

- world-famous NEWMAN MOTORS
- net savings up to 40%
- immediate delivery
- unconditionally guaranteed
- superior design— to N.E.M.A. standards

For the first time, the complete world-famous line (2 million installed in 62 countries since 1935) of NEWMAN MOTORS, built to N.E.M.A. standards, is offered to the American Market in sizes up to 230 H.P.

These are new, high-quality motors stamped with the prestige of a great motor-making company. Vast savings, dependability, unconditional guarantee are offered to American buyers.

Any motor sent free and without obligation for examination and testing. Factory stocks at New York, Chicago, Savannah, Houston, Portland, San Francisco and Los Angeles.

Write for a catalog and price list to-day

Newman INDUSTRIES (AMERICA) INC.
43 BROAD STREET, NEW YORK 4, N.Y.

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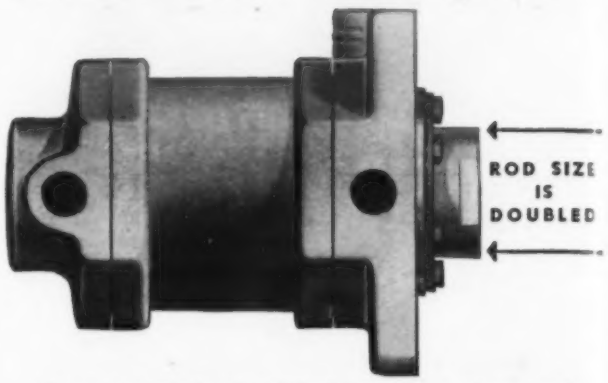
RIVETT 2:1 CYLINDERS

Increase Output!



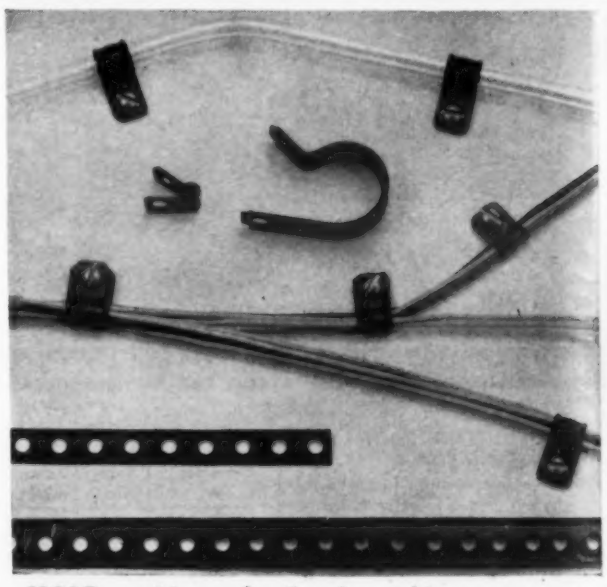
Rivett 2:1 Hydraulic Cylinders have a piston rod about twice the diameter of a standard rod. This reduces displacement, allowing faster retraction. With cycle time shortened, the cylinder accomplishes more work. Saving is made in motor and pump size. Available in 6 mountings, in 10 bore diameters, in strokes up to 96" and with cushioning.

Write for Catalog Section 106

RIVETT LATHE & GRINDER, Inc., Dept. NED-9
Brighton 35, Boston, Mass.

WHEN YOU APPLY HYDRAULIC OR AIR POWER, PLAN WITH **RIVETT**

▲ For more details circle NED-928 J4 on enclosed inquiry slip ▲



HOLD — wiring — fragile glass tubing — mercury switches—components—etc. with these **NyGrip*** (all Nylon) plastic cable clips and perforated strapping—light weight — tough — flexible — strong — chemically resistant—use from —60 to 250°F— send for free samples and literature. *TM

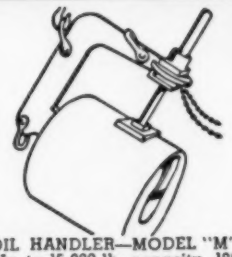
WECKESSER CO.
5251 N. Avondale Ave. Chicago 30, Ill.

▲ For more details circle NED-929 J4 on enclosed inquiry slip ▲

ONE MAN coil stock grabs all sizes... ↑ LIFT ↻ TURN ↓ STACK

COIL GRAB—MODEL "A"—Up to 5,000 lb. capacity. 1" to 24" widths. Easily separates coils stacked without spacers.

COIL LIFT—MODEL "B"—Up to 1,000 lb. capacity. ½" to 5" widths. Perfect for moving and turning narrow coil stock.



COIL HANDLER—MODEL "M"—Up to 15,000 lb. capacity. 18" to 48" widths. Ideal for turning large, heavy coils.

COMPLETE LINE OF COIL HANDLING EQUIPMENT

- *From Slitter*
- *To Storage*
- *To Reel*

DIXON *Automatic Tool, Inc.*
2300 23rd AVE. • ROCKFORD, ILLINOIS

▲ For more details circle NED-930 J4 on enclosed inquiry slip ▲

PORTABLE MIXERS

. . . offer ECONOMY

Operating expenses dip to a new low when you choose Portable Mixers from the complete Eastern Series. Available from 1/20 to 5 H.P. with a variety of speeds and motor enclosures. Your small initial investment pays rich dividends in economy.

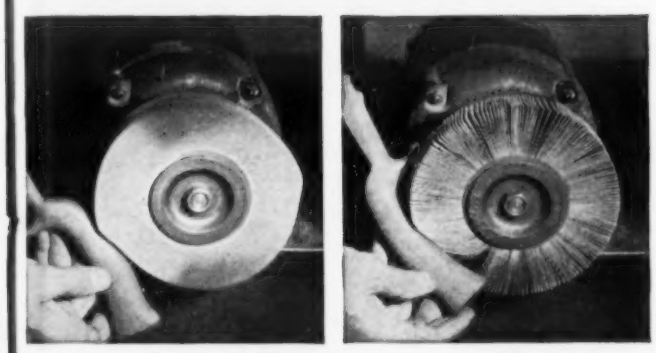
For complete mixer selection information write for Eastern Catalog 510-A

Eastern INDUSTRIES, INC.
REGENT ST., E. NORWALK, CONN.

▲ For more details circle **NED-931 J4** on enclosed inquiry slip ▲

GRIND-O-FLEX

the new flexible
GRINDING WHEEL



★ Removes burrs, flash, tool marks from irregular surfaces
★ Will not "flat" or dig into contoured shapes
★ Finishes metals, plastics; satin finishes stainless steel
★ Requires no special equipment, attaches to power tools
★ Safe and easy to use, requires no skill or experience
★ Comes in a wide variety of aluminum-oxide grits
★ See your Industrial Supply Dealer or write for catalog

MERIT PRODUCTS, INC.
4023 Irving Place, Culver City, California
Manufacturers of SAND-O-FLEX and GRIND-O-FLEX abrasive tools

▲ For more details circle **NED-932 J4** on enclosed inquiry slip ▲

miniature in size . . .
GIANT in performance

Gotham remote reading dial thermometers fill big need for hairline sensitivity, constant accuracy

- DIAL SIZE — 2½" and 3½".
- THERMAL SYSTEM — Stainless steel with bulb only half the size of standard bulb. Mercury actuated.
- DIAL — Black or white with contrasting figures and graduations.
- MOUNTING — U-shaped clamp assembly.
- MOVEMENT — Sensitive, corrosion - resistant, all brass.
- ACCURACY—1% of full scale range over middle half of dial.
- CASE AND RING—Drawn steel case; brass friction fit ring.
- RANGES—Minus 40° to plus 1000°F.

Write today for descriptive literature.

UNITED STATES GAUGE
DIVISION OF
AMERICAN MACHINE AND METALS, INC.
Sellersville, Pa.

▲ For more details circle **NED-933 J4** on enclosed inquiry slip ▲

New Processes & Materials

LAMINATED PLASTIC
flexible "engraving stock" type

Applications calling for a flexible, nonbreakable material for permanent identification by engraving can make use of Gravoflex laminated plastic. It is scratch, weather and stainproof; can be bent by hand to any shape; and may be cut with scissors, paper cutter or metal shear. Edges will not chip. Material can be nailed without predrilling and can be stitched or stapled. Lettering cut through the top layer will stand out permanently on a contrasting background. Material is available in strips, sheets or cut nameplates in 1/32, 1/16 and ⅛-in. thicknesses. Made by **Hermes Plastics, Inc.,** Dept. 26, 13-19 University Pl., New York 3, N. Y.

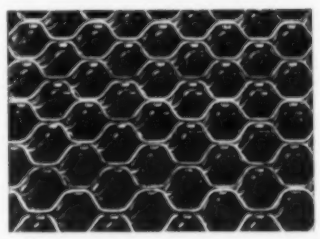
▲ For more details circle **NED-934 J4** on enclosed inquiry slip ▲

SILICONE WATER REPELLENT
gives masonry low absorption rate

Silicone water repellent for masonry, designated Dri-Film 103, minimizes efflorescence, retards spalling and cracking and keeps exterior above-ground masonry surfaces clean. Product is brush or spray-applied, and 1 gallon of diluted material covers 75 to 100 sq ft. A common brick treated with 5 per cent silicone solids diluted with commercial solvent shows absorption of 0.01 per cent moisture after immersion in water for one week. "Breathing" of masonry is not hindered. Developed by **General Electric Co.,** Chemical Div., 1 Plastics Ave., Pittsfield, Mass.

▲ For more details circle **NED-935 J4** on enclosed inquiry slip ▲

METAL REINFORCING GRID
for embedment in flooring materials



Industrial load carrying surfaces armored with Bufnel Steel-Grid metal reinforcing grids will not buckle, warp, crack or rot. It is intended for use on factory and warehouse floors, ramps, docks, aisles, railroad crossings, etc., being embedded in concrete, mastic, asphalt or any other hard setting plastic surfacing material. Other uses include reinforcing for installation of refractory lining and insulation, fireproofing of structural supports and prolonging life and reinforcing surfaces of linings to resist abrasion, erosion, heat and corrosion. It can be formed and shaped. Made by **Bufnel Co.,** Box 187, Hollydale, Calif.

▲ For more details circle **NED-936 J4** on enclosed inquiry slip ▲

OSTER "SEWER MASTER"

Makes Short Work of the Tough Cleaning Jobs

The powerful Oster "Sewer Master" quickly removes obstructions 100 feet or more from the sewer entrance; yet it weighs less than 100 pounds and is easily wheeled to the job, even up or down stairs.

The chuck jaws securely hold and revolve the "snake" in either direction at any distance from the sewer entrance. A large selection of cutting tools are available for most efficient removal of various types of obstructions. For all the facts on the time and money saving "Sewer Master", contact your Oster Distributor, or write us direct.

THE OSTER MANUFACTURING CO.
Main Office and Factory:
2066 East 61st St. • Cleveland 3, Ohio

Builders of Cost Reducing Threading Equipment Since 1893

▲ For more details circle **NED-937 J4** on enclosed inquiry slip ▲

HARDINGE ELMIRA, N.Y. COLLETS for LATHES and MILLERS

Precision work requires precision collets. HARDINGE Draw-in Collets assure you of all-essential accuracy plus durability and economy . . . performance that has established leadership since 1890.

HARDINGE Collets symbolize accuracy, long life, and low cost because they are hardened and ground both internally and externally, have heat treated threads — and cost no more than ordinary collets.

HARDINGE COLLETS
For All Lathes and Automatics
Backed by 60 Years of Manufacturing Experience

HARDINGE BROTHERS, INC., ELMIRA, N. Y.

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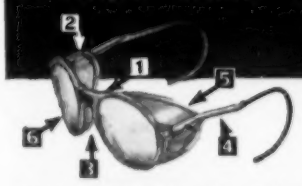
first really new development in safety spectacles in years!

WILLSON *"Contour-Spec"**



Style WCS47
Covered by Design Patent 168,988

New... hinged bridge gives snug, comfortable fit...self-adjusting to any facial contour!

1 **New hinged bridge** combines the flexibility of cup-type goggles with the lightweight, compact protection of safety spectacles.

2 **One all-purpose size** permits universal fit. Bridge hinge gives automatic adjustment to any bridge width from 18-26 mm.; one eye size—47 mm.—fits everybody. *No need to stock a variety of bridge and eye sizes.*

3 **Plastic nose-and-cheek pads** provide *full closure* around eye cavity.

4 **Contour-shaped** adjustable plastic-and-cable temples hold spectacles firmly in place.

5 **Matching sideshields** are perforated plastic, providing protection at sides—*fold back* for pocket compactness.

6 **Butyrate frame** — *toughest plastic used for spectacles.* Standard frame is flesh colored, fitted with 6-curve Willson Super-Tough* glass lenses. Available also with green frame and sideshields, fitted with Willsonite* Super-Tough green glass lenses.

Hinged to fit any face snugly!

See how the unique hinged bridge allows the Contour-Spec to open up to fit broad faces and close up for narrow faces. It's this feature that allows Contour-Specs to contact the entire eye cavity and makes them fit so comfortably yet securely.

Order a supply of Contour-Specs from your Willson distributor. Let your workers try their amazingly greater comfort, and see how they're preferred over ordinary safety spectacles!

More Than 300 Safety Products* Carry This Famous Trademark
WILLSON
Established 1870
*Trademark

WILLSON PRODUCTS, INC., 219 Washington Street, READING, PENNA.

▲ For more details circle **NED-939 J4** on enclosed inquiry slip ▲

Kleenslot THE PERFECT PREPARATION SCREEN GUARD

The screen guard is built into the screen and the guard bars permit only the finer particles to pass over the screen. All sizes and most materials furnished.

HERE'S HOW IT'S DONE

Cross section at left shows how KLEENSLOT Screens operate on a non-clogging principle.

Wedge Wire KLEENSLOT screen guards can be furnished in special sizes to your requirements in practically any type of long wearing metal. They are made to close tolerances like all Wedge Wire products—the width of each wire is held to plus or minus .002 to insure uniform opening width. All Wedge Wire features are embodied in these screen guards and it is to your advantage to consider them from the standpoint that they are non-clogging, non-blinding, strong, rigid, uniform and more economical in the long run.

SEND THIS COUPON TODAY! • DON'T DELAY

WEDGE WIRE CORP.
Gas St. at Nickel Plate R.R., Wellington, Ohio
Gentlemen:
Please send us literature outlining the superiority of Wedge Wire construction.
COMPANY _____
NAME _____
ADDRESS _____

Wedge-Wire CORPORATION
GAS ST. AT NICKEL PLATE R.R. • WELLINGTON, OHIO

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1626-K W. WALNUT STREET CHICAGO 12, ILLINOIS

A COMPLETE LINE OF RELAYS SERVING AMERICAN INDUSTRY

For more details circle NED-944 J4 on enclosed inquiry slip

LOGAN AIR AND HYDRAULIC POWER

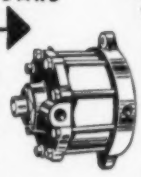
SPEEDS • COORDINATES • REFINES PRODUCTION IN OVER 10,000 INDUSTRIAL PLANTS

AIR CYLINDERS • AIR-DRAULIC CYLINDERS • AIR and HYDRAULIC PRESSES • COLLET GRIP TUBE FITTINGS • SURE-FLOW COOLANT PUMPS • HYDRAULIC POWER UNITS • HYDRAULIC CYLINDERS • HYDRAULIC CONTROL VALVES • AIR CHUCKS • AIR CONTROL VALVES

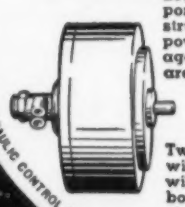
Logan

ROTATING AND NONROTATING AIR CYLINDERS

NONROTATING—7 STANDARD MOUNTING TYPES



Standard sizes from 1½" to 16" bore; maximum stroke, 18". Special models to meet your requirements. Logan features larger ports, sturdier construction, maximum power without leakage, permanent seal around piston rod.



ROTATING

Two standard styles—Type R with cast iron body; Type K with lightweight aluminum body. Bore 1½" to 20" stroke 1" to 2". Longer strokes special.

SAVES TIME Logan AIR AND HYDRAULIC EQUIPMENT EXPERT • MOTION

LOGAN MANUFACTURES 6,975 STANDARD CATALOGED ITEMS • CATALOG ON REQUEST

Consult Logan for your Special Heavy-Duty, Mill-Type Cylinder requirements.

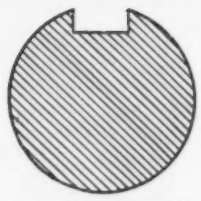
LOGANSPORT MACHINE CO., INC.

808 Center Avenue Logansport, Indiana

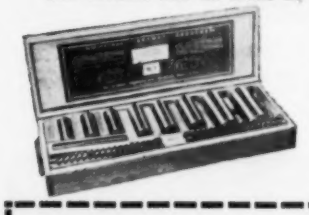
For more details circle NED-945 J4 on enclosed inquiry slip

1¢ SALE!

of KEYWAYS by the minute



Believe it or not, you can cut any keyway from 1/16" to 1" in any bore from ¼" to 3", by hand, with arbor press, in *one minute* for as little as *one cent* per keyway, with



du Mont *Minute Man* KEYWAY BROACH KITS

The du MONT CORPORATION, Greenfield, Mass.

MAIL FREE KEYWAY BROACH CATALOG and PRICE LIST D, describing 25 standard kits, 23 standard sizes of broaches, 71 standard size bushings and a wide variety of production type guideless broaches and square broaches.

Name .....

Company .....

Address .....

For more details circle NED-946 J4 on enclosed inquiry slip

New Literature & Catalogs

Aluminum Ladders

Louisville Ladder Co.—Aluminum ladder equipment described and illustrated in 16-page catalog 54 includes extension ladders, straight ladders, extension trestles, sectional ladders, safety platforms, heavy and light duty steps, scaffold planks, swing stages and A-jacks. Three-section extension ladders up to 70 ft long are available. Rung assembly riveted to side rails is feature of Safe-Weight straight and extension units.

For more details circle NED-947 J4 on enclosed inquiry slip

Chemical Porcelain Equipment

Lapp Insulator Co., Process Equipment Div.—24-page bulletin 438 describes line of chemical porcelain equipment for process applications. Equipment covered includes Y and angle valves, safety valves, plug cocks, pipe and fittings, towers, tower plates, nozzles and raschig rings. Tufclad armoring for all Lapp porcelain equipment is described.

For more details circle NED-948 J4 on enclosed inquiry slip

Small Tools

General Hardware Mfg. Co.—12-page illustrated catalog No. 53-C contains brief data on an extensive line of small tools. Among them are drill grinding attachment, depth and angle gages, small hole gage sets, protractors, offset screwdrivers, scribers, tap wrenches, rules, calipers, machinist's jack, chisel and blade sharpener, flaring tools and tubing cutters.

For more details circle NED-949 J4 on enclosed inquiry slip

Centrifugally Cast Parts

Shenango-Penn Mold Co.—Centrifugally cast parts suited for use as bushings, liners, sleeves, rings, rolls or symmetrical or annular shapes are covered descriptively in bulletins 150 and 151. No. 150 deals with nonferrous parts in manganese and aluminum bronzes, red bronzes, brass, Monel and special alloys. Bulletin 151 covers ferrous parts of Meehanite metal, Ni-Resist and special iron alloys.

For more details circle NED-950 J4 on enclosed inquiry slip

Process Timer

General Electric Co.—Operation, advantages and applications of type TSA-18 process timer are covered in 8-page illustrated bulletin GEC-1223. Connection diagrams for typical applications, installation and cut-away views, prices and specifications are included.

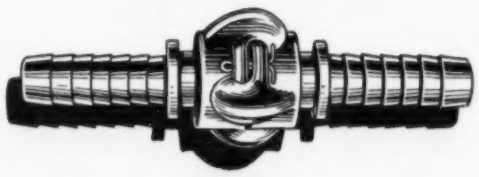
For more details circle NED-951 J4 on enclosed inquiry slip

Crane Runway Rails & Accessories

L. B. Foster Co.—Specifications and engineering data on crane runway rails and accessories are found in 4-page bulletin C-1971. Described are rails, angle bars, crane stops, rail clips, bolts, hook and anchor bolts and bearing plates. Ordering information is included.

For more details circle NED-952 J4 on enclosed inquiry slip

"AIR KING"



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HOSE COUPLING

A strong, durable coupling for quick, tight connections on field or factory air hose. Plain design—no parts to get out of order or clogged with dirt. Made in hose ends and male and female threaded pipe ends. Completely interchangeable. Patented safety locking device is proof against vibration and rough handling. Malleable iron (rust-proofed) or bronze.

From Your Hose Supplier or Industrial Distributor

DIXON VALVE & COUPLING CO.

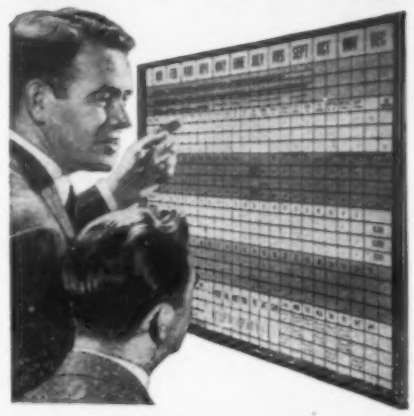
PRODUCERS OF *The Quality Line* COUPLINGS • NIPPLES • MENDERS • CLAMPS

"BOSS" "GJ-BOSS" "DIXON" "KING" "AIR KING" "DIX-LOCK"

PHILADELPHIA, PA. BRANCHES: CHICAGO • BIRMINGHAM • LOS ANGELES • HOUSTON

For more details circle NED-953 J4 on enclosed inquiry slip

GRAPHIC VISUAL CONTROL



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★ Graphic Picture of Your Operations—Spotlighted by Color
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GRAPHIC SYSTEMS, 55 West 42nd St., New York 36

For more details circle NED-954 J4 on enclosed inquiry slip

The BIG Tool and Job Capacity

18" CLAUSING DRILL PRESS with power feed

★ Drills 1" cast iron, ⅞" steel ★ No. 3 Morse Taper, 6½" spindle travel ★ HEAVY-DUTY GEAR-DRIVEN POWER FEED TO TAKE FULL ADVANTAGE OF THIS BIG TOOL AND JOB CAPACITY.

An 18" heavy-duty drill press, with larger tool and job capacity, PLUS a heavy-duty GEAR-DRIVEN power feed to make effective use of its capacity. The power feed, with its large heavy-duty gears, is positive and sure — NO belt slippage to reduce power. Feed selection is instant — BY DIAL — no belts to change. Add the Clausing features of new spindle bearing engineering, vernier depth stop, and exclusive head and table positioning mechanism — and you know this is a tool that can save you plenty on both set-up and operating time. Get all the facts before you buy any drill. See your ATLAS CLAUSING Dealer!

WRITE FOR LITERATURE —TODAY!

Atlas CLAUSING

CLAUSING DIVISION—ATLAS PRESS COMPANY

9-113 N. PITCHER ST. • KALAMAZOO, MICHIGAN

For more details circle NED-955 J4 on enclosed inquiry slip

20 times more Filtering Area with Nugent Cutting Oil and Coolant Filters

Nugent Pressure Filter installed on turret lathe for filtering cutting compound.

NUGENT Cutting Oil and Coolant Filters provide 20 times more filtering area than other filters of comparable size. This means better filtering—and better filtering means a great savings in lubricants, longer tool life and fewer rejects.

Nugent pressure filters of this type are built in capacities from ¼ to 350 GPM for any machine that uses oil or cutting fluids.

Write for Complete Information

NUGENT TRADE MARK Est. 1897

Wm. W. Nugent & Co., Inc.

401 N. Hermitage Ave. CHICAGO 22, ILLINOIS

Oil Filters, Oiling and Filtering Systems, Telescopic Oilers, Oiling Devices, Sight Feed Valves, Flow Indicators . . . *Representatives in Principal Cities*

For more details circle NED-956 J4 on enclosed inquiry slip

NEW

GLAS-COL *portable*

ELECTRIC MELTING POT

for melting asphalts . . tars . . pitches . . resins . . mastics . . and other viscous materials.

Ideal for repair jobs. This portable melter weighs only 15 lbs. Fits into your car trunk. No need to tussle with big, heavy, production melting equipment.

Use it for melting asphalt for roof jobs . . tar for sealing seams in concrete . . and many other repair and maintenance applications.

Plugs into any 115-volt outlet (1250 watts). 3½ Gallon capacity. Heating chamber Fiberglas insulated.

only $75.00

Ask for descriptive Bulletin 201. Glas-Col Apparatus Co., Inc., Dept. ND, 711 Hulman St., Terre Haute, Ind.

GLAS-COL MELTING POTS

For more details circle NED-957 J4 on enclosed inquiry slip

Over 85% of the torque wrenches used in industry are

STURTEVANT TORQUE WRENCHES

Read by Sight, Sound or Feel

- Permanently Accurate
- Practically Indestructible
- Faster—Easier to use
- Automatic Release
- All Capacities

in inch ounces ... inch pounds ... foot pounds
(All sizes from 0-6000 ft. lbs.)

Every manufacturer, design and production man should have this valuable data. Sent upon request.

P.A. STURTEVANT CO. ADDISON QUALITY ILLINOIS

For more details circle NED-958 J4 on enclosed inquiry slip

PRODUCTION BORING with E-Z SET by Maxwell

Only the MAXWELL E-Z Set boring tools feature high speed operation, micrometer-like adjustment to 0.0001-inch and maximum boring range.

Interchangeable shanks permit E-Z Set boring tools to be used in turret lathe, jig-bore, milling machine, boring mill, automatic or other machine tools. Because they can be adjusted for cut in only one-tenth the time formerly required by similar tools, these Maxwell-made tools can meet high-speed production on schedules.

E-Z Set boring tools are available in three models having maximum boring bar capacities of ½, 1 and 1½ inches and covering a boring range of from ⅜ to 20 inches.

Write today for catalog.

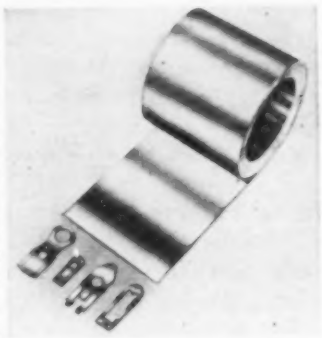
THE MAXWELL COMPANY

391 Broadway • Bedford, Ohio

For more details circle NED-959 J4 on enclosed inquiry slip

New Processes & Materials

BERYLLIUM COPPER STRIP available in five tempers



Thicknesses from 0.001 to 0.025-in. are available in Penntemp mill hardened or pretempered beryllium copper. Strip has minimum tolerances ranging from ±0.0001 to ±0.0004-in., depending upon thickness. It offers many of features of age-hardening beryllium copper, yet requires no heat treatment. High strength and hardness, good fatigue resistance, and conductivity are characteristics. Material is available in five tempers, each with a different combination of strength and formability. Made by **Penn Precision Products, Inc.,** Dept. NE, 501 Crescent Ave., Reading, Pa.

For more details circle NED-960 J4 on enclosed inquiry slip

SEALING COMPOUND checks cutting oil leakage

Problem of leakage of cutting and cooling oil in machine tools can be eliminated by use of No. 1372 liquid sealing compound. It is impervious to high temperatures and resistant to synthetic cutting and cooling oils used with lathes, drills and other machine tools. Protection is offered against leaks into gear boxes which dissolve lubricants. Made by **Permatex Co.,** Aviation Div., 1702-1720 Ave. Y, Brooklyn 35, N. Y.

For more details circle NED-961 J4 on enclosed inquiry slip

CASTING RESIN for producing electronic embedments

Wide temperature range extending from −100 to 400° F is reported for Stycast 2850 GT casting resin for electronic embedments. For short periods it can be used at 500° F. Cured plastic has a low thermal coefficient of expansion (approximately that of aluminum and brass). This makes possible embedment of large metallic inserts without cracking on temperature cycling. Other features of resin are low shrinkage during cure, good adhesion to various materials, possibility of room temperature cure, 13,300 psi flexural strength and dielectric strength of 455 v per mil. Made by **Emerson & Cuming, Inc.,** 869 Washington St., Canton, Mass.

For more details circle NED-962 J4 on enclosed inquiry slip

How to eliminate *this wasteful nuisance . . .* SMOKE

Your company can be rid of smoke and save on fuel bills simply by installing inexpensive smoke controls that *really* work.

A properly fired burner does not smoke! *Fireye* smoke controls assure maximum firing efficiency and economy by warning operating personnel when smoke exceeds satisfactory firing conditions or violates your local smoke ordinance.

Call in your local *Fireye* Smoke Control salesman. He'll demonstrate this modern, simple photoelectric method that's being used throughout the country. Call or write Combustion Control Corporation, Dept C8-9 Beacon Street, Boston, Mass.

fireye

Photoelectric Smoke Controls

For more details circle NED-963 J4 on enclosed inquiry slip

BE *Safe* COUPLE-UP WITH PREMIER

TRUCK-TRAILER coupling equipment

THERE'S A SOLID PINTLE OR SWIVEL PINTLE TYPE IN A VARIETY OF SIZES FOR EVERY COUPLING NEED

Premier hitches are engineered for one-hand operation—*no struggling to engage or disengage the drawbar* — and ruggedly built for long life and *safety* —the double locking mechanism insures maximum safety. *Premier hitches meet I.C.C. standards.*

Premier Hitches are easily serviced —standard replacement parts are readily available.

FOR A SAFER, SMOOTHER COUPLING CONNECTION... USE PREMIER DRAWBARS

Pioneer manufacturers of coupling equipment — used by major fleets in the West for more than 25 years.

Write today for PREMIER HITCH & DRAWBAR CATALOGS.

Illus.: No. 290—Swivel Pintle type.
No. 480—Extra Heavy Duty Solid Pintle type.

PREMIER MANUFACTURING COMPANY
943 N. Russell St. • Portland 12, Oregon

For more details circle NED-964 J4 on enclosed inquiry slip

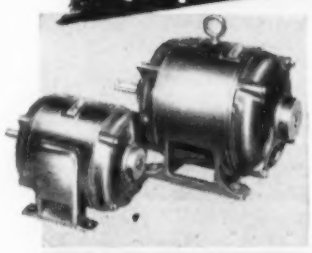
NEW

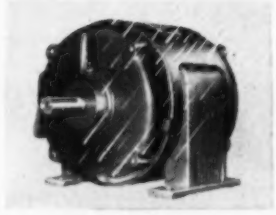
Century Performance-Rated©

INTEGRAL H. P. MOTORS

Now available in 1...1½...2 H. P. sizes—
NEMA frames 182 AND 184

Improved Motors to match your needs





SMALLER—LIGHTER
More uniform silicon-laminated steel; and thinner, tougher "Mylar" slot insulation are just two developments that help make these new Century Motors much *smaller* and *lighter.*

BETTER PROTECTION
You get better internal motor ventilation and far better protection from falling liquids and solids . . . still maintain 40° C. temperature.

MORE FLEXIBLE MOUNTING
You can have cushion or solid mounting—sleeve or ball bearings. End brackets can be rotated for floor, ceiling or side wall mounting.

New insulating materials possess far better dielectric qualities. Die cast aluminum rotors are individually, dynamically balanced to assure freedom from vibration.

Century manufactures AC and DC Generators—Repulsion Start, Capacitor, Single Phase, Polyphase and Direct Current Motors up to 400 H.P.

Specify Century Performance-Rated Motors for your equipment. Call a Century District Sales Office or your nearest Century Authorized Distributor.

Century C MOTORS Performance-Rated©

CENTURY ELECTRIC CO.
1806 Pine Street
St. Louis 3, Missouri

⅛ to 400 H. P.

Offices and Stock Points in Principal Cities

For more details circle NED-965 J4 on enclosed inquiry slip

STOP WASTING DRILLS!

FREE BOOKLET...

Shows how to prevent excessive drill breakage, vastly prolong drill life . . . and eliminate time wasted by valuable skilled mechanics grinding drills!

Black Diamond's "Positive Positioning" feature positions drill to exact twist you want . . . *automatically*. Now anyone can sharpen and web-thin with scientific accuracy . . . on a Black Diamond Drill Grinder!

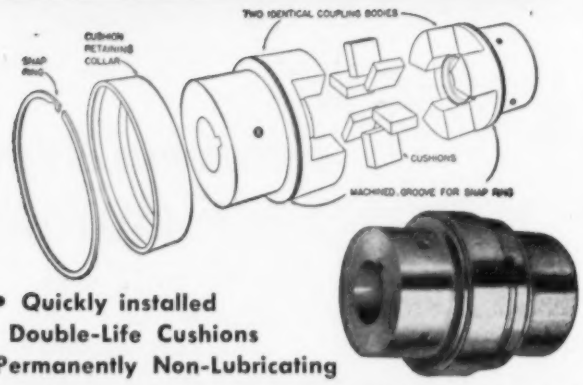
WRITE TODAY!

BLACK DIAMOND

SAW & MACHINE WORKS, INC. 72 NORTH AVE. NATICK, MASS.

▲ For more details circle NED-966 J4 on enclosed inquiry slip ▲

LOVEJOY FLEXIBLE COUPLINGS



- Quickly installed
- Double-Life Cushions
- Permanently Non-Lubricating

- Lovejoy's uncomplicated design permits easy, quick installation or removal. Load cushions are in plain sight at all times for rapid inspection and can be removed without tearing down the coupling.
- One-half the cushions act as idlers during operation, except on reversing loads. In non-reversing operation, the cushions can be reversed to double their service life.
- Lovejoy Coupling never require lubrication.
- Lovejoy manufactures a complete range of flexible couplings from fractional hp. at up to 1750 rpm. to over 2400 hp. at 1200 rpm. and higher. Get full information on this "maintenance-free" line, including illustrated catalog with complete specifications and operating capacities.

LOVEJOY FLEXIBLE COUPLING CO.
4803 W. Lake St., Chicago 44, Ill.

Also Mfrs. of Universal Joints, Variable Speed Pulleys and Transmissions

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Why use a Koil-Kradle?

IMPROVED AUTOMATION FOR PUNCH PRESSES, SHEARS, SLITTERS, ROLL FORMERS and all similar machines fabricating from any coiled stock.

benchmaster
Koil-Kradle
with VARI-LOOP Control

KOIL-KRADLE makes available a *controlled length of slack loop* from which any machine can draw ...shuts off automatically when loop exceeds machine requirements.

KOIL-KRADLE CUTS COSTS! Uses much larger coils; lowers stock costs; eliminates frequent reloading. This means more press time, more production, more profit.

LICKS LOADING PROBLEMS—No heavy lifting, no time-consuming problems...simply roll coil up ramp into cradle position.

SAVES VALUABLE FLOOR SPACE—No need for 8 to 10 feet of wasted space...KOIL-KRADLE butts against any machine it supplies. Compact, occupies only a few feet of floor space itself!

Write for free circular or see your Benchmaster dealer.

Benchmaster Manufacturing Co. 1835 W. Rosecrans Ave. Gardena, California

benchmaster

World's largest manufacturer of small punch presses and mills.

▲ For more details circle NED-968 J4 on enclosed inquiry slip ▲

New Literature & Catalogs

Welding & Cutting Equipment

K-G Equipment Co.—Cutting torches, cutting tips, welding torches and attachments, welding and heating tips, mixers, extension tubes, adaptors and fittings, regulators and welding and cutting outfits are described and illustrated in 20-page catalog 54 E. Welding and cutting apparatus price list is supplemented.

▲ For more details circle NED-969 J4 on enclosed inquiry slip ▲

Wire Baskets & Tanks

Wiretex Mfg. Co.—Sections on baskets, processing and heat treating equipment, fixtures and crates, tanks, plating and special equipment are included in 12-page catalog on wire baskets and tanks. Items can be made from such metals and alloys as nickel chrome, stainless steel, aluminum, Monel, Inconel, steel, copper and brass.

▲ For more details circle NED-970 J4 on enclosed inquiry slip ▲

Rotary Cutting Tools

Rota-File Corp.—Rotary files and cutting tools applicable to deburring and finishing of castings and forgings, routing, slotting, countersinking, enlarging holes, mortising, recessing, cutting oil grooves and profiling are illustrated and specified in 12-page bulletin "Rota". Tools are made from high speed steel and carbides, ground from solid and hand chisel cut.

▲ For more details circle NED-971 J4 on enclosed inquiry slip ▲

Protective Coatings

Ceilcote Co.—Problem of selecting the right protective coating for various industrial applications is simplified by 8-page illustrated catalog C-150 which gives data on nine different coatings for wood, metal and masonry surfaces. This information covers base formulation, temperature and abrasion resistance, chemical properties, adhesion, application method, surface preparation and colors.

▲ For more details circle NED-972 J4 on enclosed inquiry slip ▲

Blast Cleaning, Dust Control Equipment

Pangborn Corp.—24-page condensed catalog 1210 presents entire line of blast cleaning and dust control equipment. Rotoblast, Airblast and hydraulic methods of abrasive cleaning and finishing applications are discussed and equipment making use of these principles are pictured and described. All standard and special machines are covered.

▲ For more details circle NED-973 J4 on enclosed inquiry slip ▲

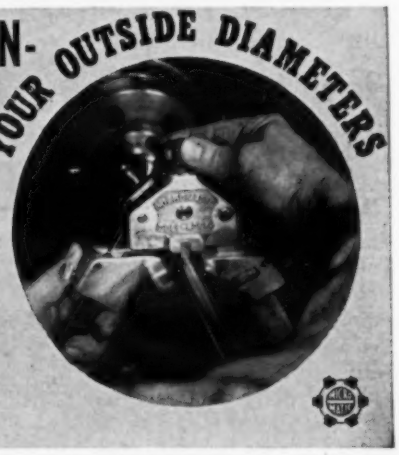
Vapor Degreasing Techniques

Manufacturers Processing Co.—"Vapor Degreasing Do's and Don'ts" is title of 24-page illustrated manual covering safety, personnel, correct layout and maintenance of equipment, efficient operations, drainage, machines and chemicals. A trouble shooting section is included.

▲ For more details circle NED-974 J4 on enclosed inquiry slip ▲

PRECISION-FINISH YOUR OUTSIDE DIAMETERS

The Odee-HONE



★ ACCURATE
★ INEXPENSIVE
★ VERSATILE
★ LIGHTWEIGHT

Corrects out-of-roundness, waviness, chatter . . . Generates diametric size within .0001" tolerance . . . Hones all parts from 1/2" to 2 1/2" in diameter—regardless of length or material . . .

Can be used on any lathe, drill press, electric drill . . .

Simple to set up and operate—no aligning, fixturing or wheel dressing is necessary . . .

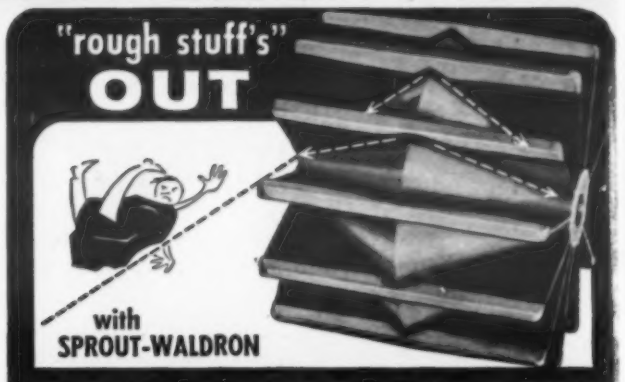
Removes a few "tenths" or a few "thousandths" stock in less time than it takes to re-center, indicate a part, and dress an abrasive wheel.

Write to:

MICROMATIC HONE CORPORATION
8100 SCHOOLCRAFT • DETROIT 38, MICHIGAN
Guilford, Conn. • Rockford, Ill. • Los Angeles 23, Cal. • Brantford, Ont., Canada

▲ For more details circle NED-975 J4 on enclosed inquiry slip ▲

"rough stuff's" OUT



BELT-SAVER PULLEYS

Sharp lumps and abrasive materials are cast out of Belt-Saver Pulleys by the exclusive cone and wing design . . . without lodging between belt and pulley. This protects belts so effectively that belt life is increased 50% to 400%.

For conveying and transmission use, Sprout-Waldron also offers a wide selection of sturdy cast-iron pulleys in many sizes and types.

Write for free booklets!

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8 LOGAN STREET • MUNCY, PA.
PELLET MILLS • HAMMER, ROLLER, ATTRITION, AND BURR STONE MILLS
MIXERS • SCREW, BELT, AND PNEUMATIC CONVEYORS • BUCKET ELEVATORS
CUTTERS, CRUSHERS, AND FEEDERS • REELS, SEPARATORS, AND ASPIRATORS

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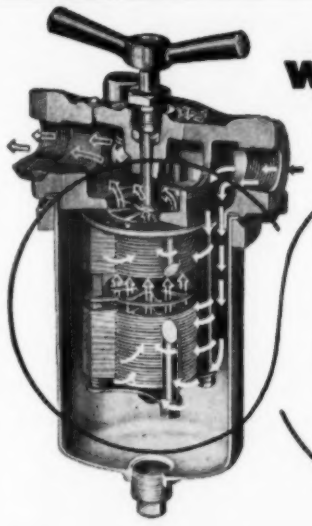

WHAT FLUID STRAINER

is non-stopping (A) and is permanent (B) and handles full flow (C) and guarantees performance (D)?

A. Cuno AUTO-KLEAN is continuously-cleanable, manually or automatically, without stopping flow

B. Cuno AUTO-KLEAN is all-metal, disc-type, non-collapsible

C. Cuno AUTO-KLEAN can handle full flow—a few to more than 4000 gpm—in same space as usual partial-flow type

D. Cuno AUTO-KLEAN will remove all particles larger than specified—from .0035 in. to .062 in.

CUNO

Fluid Conditioning

Removes More Sizes of Solids from More Types of Fluids

Widely used on lubricating, hydraulic and fuel oils, water, and all industrial fluids.

For free booklet on fluid straining, address Cuno Engineering Corp., Dept. 705, Meridan, Conn.

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It's A NEW ADDITION TO THE DICO WHEEL FAMILY

DEMOUNTABLE HUB WHEELS

For Trailers • Farm Equipment • Industrial Use

4.00 x 8
(16.25" outside rubber diameter)
(5) Bolt Hub with 4 1/2", 4 3/4" and 5" bolt circles. The hub this wheel will take various automotive type wheels having above bolt circle requirements.

WIDE BASE

5.00 x 8 (16.4" outside rubber diam.) 5.50 x 8 (18.36" outside rubber diam.)
(5) Bolt Hub—4 1/2" bolt circle. 4 1/4" wide base rims accommod tires with greater air volume and heavier load capacity. L air inflation gives greater shock absorption, assuring smoot cushioned riding. Get all details NOW on the new DICO mountable Hub Wheels.

DICO

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DES MOINES 5, IOWA

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1	51	101	151	201	251	301	351	401	451	501	551	601	651	701	751	801	851	901	951	1001	1051	1101	1151
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J-4

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ADDRESS .....

CITY ..... ZONE ..... STATE.....

Principal Products Manufactured .....

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- ☐ Over $1,000,000
- ☐ $500,000 to $1,000,000
- ☐ $200,000 to $500,000
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LINEMASTER Treadlite

REVOLUTIONARY NEW FOOT SWITCH

3½" x 2⅝" x 1"

Not much larger than a pack of cigarettes! Small, lightweight, efficient Treadlite gives you TWO accurate switching operations activated by ONE treadle. Light pressure requirements prevent fatigue. For your new product planning, specify Linemaster's Treadlite, the compact versatile foot switch housed in a smartly designed casing with slip-proof base, black crackle finish.

T-52-S—Two single pole, double throw switches; operated by one treadle; momentary contact only ..... $4.20 Without cord *

Also available: single pole, double throw switch. T-51-S..... $2.95 without cord *
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Write TODAY for complete information. Send specifications for quotations on your individual tool switch requirements. Over 20 models.

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CUT COSTS ON EVERY CLEANING JOB WITH —

COLD STEAM

Precise control of air and water blasts heavy dirt or rinses sheets and small parts with a heavy, penetrating spray.

Air Craft, Automotive, Bakeries, Breweries, Cement, Ceramics, Cheese, Construction, Distilling, Electrical, Food Processing, Foundries, Jewelry, Leather, Meat Packing, Machine Shops, Marine

HYDRO-AIR
PRESSURE WASHER

• NO BACK SPLASH!
• BLASTS STUBBORN DIRT!
• HARMLESS TO FINEST FINISH!

$9.95

HYDRO-AIR Pressure Washer connects to regular air and hot or cold water supply. Composition rubber sleeve which fits over handle protects user's hand when hot water is used.

Inquiries invited from industrial cleaning compounders interested in resale.

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D & M PRODUCTS, INC.
26 N. Raymond Ave., Pasadena 1, Calif.

For more details circle NED-980 J4 on enclosed inquiry slip

Left— Union Special Style 20100 H Bag Closing Machine

Here's how to close MULTIWALL PAPER BAGS

FOR lower production costs ...stronger, neater closures ...ability to get out rush orders in a hurry, you can't beat Union Special Bag Closing Machines! Specially built to stand up under heavy production schedules, these machines provide the high output rates needed to meet modern competitive conditions.

In the Union Special line, it's easy to find the right unit to meet your particular requirements. ASK FOR RECOMMENDATIONS.

SEND FOR THIS BULLETIN!

Get your copy of this 16 page illustrated bulletin containing helpful data and charts on the complete Union Special line of bag closing machines. UNION SPECIAL MACHINE CO., 416 North Franklin Street, Chicago 10, Illinois

UNION SPECIAL

For more details circle NED-981 J4 on enclosed inquiry slip

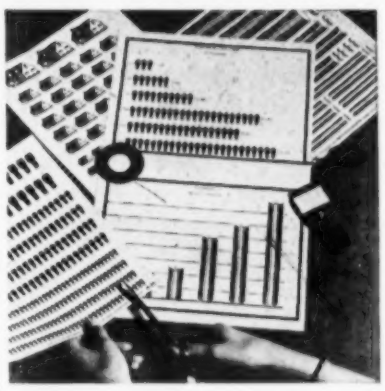
New Processes & Materials

RUST PREVENTIVE COATING applied by spray or brush

Designed to prevent rust formation on any iron or steel surface, Zinktron metallic paint can be applied over rusted surfaces after loose scale has been removed. It takes about 1 hour to dry and is applied by brush or spray, giving about 450 sq ft per gallon coverage. Test laboratory results show protected objects unharmed after 1000 hours of salt spray test. Compound is metallic grey in color, and is available in quart and gallon cans. A solvent for cleaning brushes or thinning is also available. Made by **Constad Laboratories,** Dept. N-2, 214 W. 29th St., New York 1, N. Y.

For more details circle NED-982 J4 on enclosed inquiry slip

ADHESIVE CHART SYMBOLS help liven up statistical reports



Professional looking graphic charts that will help to liven up statistical reports can be made with Picto-Paks, which are tiny pictographs on 8½ x 11-in. sheets of pressure-sensitive adhesive paper. Each sheets contains 68 to 98 symbols of one design in 1¼, ¾ and ½ in. high sizes. Available symbols depict men, women, coins, stacks of bills, power, machinery, construction, grain, etc. They adhere readily to plastic sheets, cloth or paper and can be reproduced by photocopy and offset. Made by **Chart-Pak, Inc.,** 104-8 Lincoln Ave., Stamford, Conn.

For more details circle NED-983 J4 on enclosed inquiry slip

FLAME RESISTING INSULATIONS laminates, phenolics, fibrous types

Standard manufacturing methods can be used in producing electrical insulating components from a series of flame resistant and flame retardant materials. Laminates, impact phenolics and fibrous materials in the series are classified as Class A insulating materials. Laminates can be blanked and punched, while impact phenolics are molded almost as easily as general purpose phenolics. Flame-retardant Duroid 800, a reinforced chemical specialty material, can be punched, riveted and sawed. It is UL-listed as suitable for sole support of current carrying parts. Made by **Rogers Corp.,** Dept. NED, Rogers, Conn.

For more details circle NED-984 J4 on enclosed inquiry slip

Don't let manual clamping handcuff production

Free all hands for work with WILTON'S fully automatic air-powered hydraulic vises

Foot-pedal air control activates vises, and hydraulic booster cylinder converts and multiplies air pressure, producing powerful vibration-proof grip

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WILTON TOOL MFG. CO. INC.
925 Wrightwood Avenue Chicago 14, Illinois

distributor franchises still available in some areas

Write Now for Free Catalog—Dept. NED-9

For more details circle NED-985 J4 on enclosed inquiry slip

New MANCO

HAND-OPERATED HYDRAULIC CUTTER

A brand new development in hand-operated cutting tools. Tremendous hydraulic cutting force produced by easy hand-pump action.

Provides 10 Tons Thrust

The powerful, yet compact and relatively lightweight Manco Hydraulic Cutter bites right through ½" reinforcing rod, chain, bolts, etc. Unique dual ratio pump affords rapid traverse for speed of cut. Twist of handle grip provides automatic blade retraction. Blades easily removed for sharpening. Can be adapted for riveting, crimping, punching, etc. Weight 15 lbs. Length 24".

Model 200-A

Write for complete information

Dept. NED-9

MANCO MFG. CO.
BRADLEY, ILLINOIS

For more details circle NED-986 J4 on enclosed inquiry slip

For factory floors that will not chip . . .
For skid-proof walks where feet won't slip . . .
On all machines that you equip . . .
For floors complete or center strip . . .
Use safe, long-lasting MULTIGRIP!

U·S·S multigrip FLOOR PLATE

UNITED STATES STEEL CORPORATION, PITTSBURGH
COLUMBIA-GENEVA STEEL DIVISION, SAN FRANCISCO
TENNESSEE COAL & IRON DIVISION, FAIRFIELD, ALA.
UNITED STATES STEEL SUPPLY DIVISION, CHICAGO
UNITED STATES STEEL EXPORT COMPANY, NEW YORK

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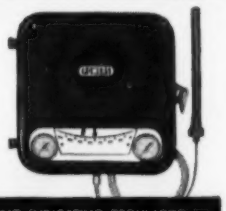
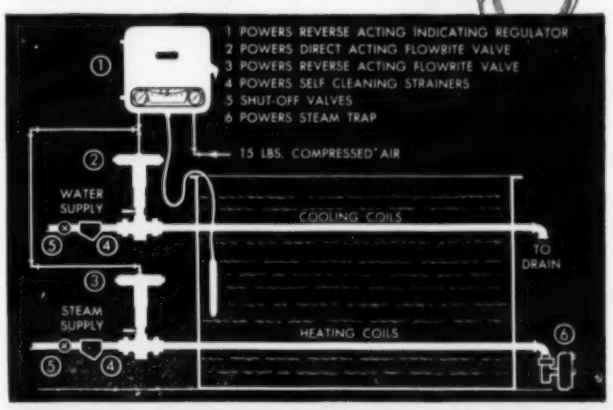
UNITED STATES STEEL

For more details circle NED-987 J4 on enclosed inquiry slip

POWERS



CAN HELP YOU — if you want precise control for a process with both HEATING and COOLING.



Application above is typical of thousands of installations now accurately under control by POWERS. Whether your problem calls for control of heating and cooling of liquids or air, Powers has the right control and experience to help you get the results you want. Bull. 370 describes the Temperature Indicating Controller shown above. Write for a copy.

(c6)

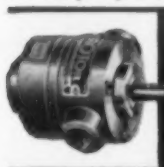
THE POWERS REGULATOR CO.
Skokie, Ill. • Offices in 60 Cities

Over 60 Years of Automatic Temperature and Humidity Control

For more details circle NED-988 J4 on enclosed inquiry slip

There's a GEROTOR Hydraulic PUMP to meet your requirements!

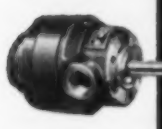
The GEROTOR line of precision engineered hydraulic pumps is designed to fill the requirements of the majority of hydraulic equipment users. The three standard GEROTOR models cover a range of g.p.m. delivery from .4 g.p.m. to 40 g.p.m. Check the capacity tables for the pump to fill your needs.



TYPE QDB

New series of small capacity pumps . . . last word in precision engineering

DELIVERY G.P.M. — 1800 R.P.M.					
Type	Discharge Pressure P.S.I.				
	0	250	500	750	1000
QDB .4	.42	.40	.38	.35	.31
QDB .75	.84	.80	.78	.73	.66
QDB 1.5	1.67	1.62	1.57	1.50	1.42



TYPE QDH

Popular intermediate size of the Gerotor line

DELIVERY — G.P.M. AT 1200 R.P.M							
Type	Discharge Pressure P.S.I.						
	0	250	500	750	1000	1200	1500
QDH 3	3.3	3.2	3.1	3.0	2.9	2.7	2.5
QDH 5	5.6	5.4	5.3	5.2	5.1	4.8	4.4
QDH 8	8.6	8.5	8.4	8.3	8.2	8.1	7.8
QDH 12	12.9	12.8	12.7	12.5	12.3	12.2	11.8

TYPE 0

When larger capacities are needed

DELIVERY — G.P.M. AT 1200 R.P.M.					
Type	Discharge Pressure P.S.I.				
	0	250	500	750	1000
O-20	20.0	19.5	18.8	18.0	17.2
O-25	25.0	24.5	24.0	23.2	22.2
O-30	31.2	31.0	30.5	29.8	29.0
O-40	43.0	42.5	42.0	41.5	40.0

Whatever your needs in hydraulic pumps . . . consult the GEROTOR engineers. Write for FREE literature and information, no obligation, of course. GEROTOR MAY CORP., P. O. Box 86, Baltimore 3, Md.

GEROTOR HYDRAULIC PUMPS & MOTORS
Pneumatic Bin Evacuators
Precision Contract Mfg.

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MASTIPAVE
FLOOR COVERING

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NON-SLIP, SUPER-TOUGH
RESILIENT, LOW-COST

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New Literature & Catalogs

Aluminum Welding

Aluminum Co. of America—176-page book "Welding Alcoa Aluminum" provides comprehensive text coupled with photos and drawings on all practical methods for welding aluminum. These include torch, arc, resistance and pressure welding. Attention is given to method selection, performance of welds, welding aluminum castings and control of welding quality. Inert-gas shielded-metal arc welding with both tungsten and consumable electrodes as well as spot and seam, flash, metal arc, carbon arc, atomic hydrogen and gas welding methods are included. Tables show alloy physical properties.

▲ For more details circle NED-991 J4 on enclosed inquiry slip ▲

Lock Nuts

MacLean-Fogg Lock Nut Co.—Reusable stop type hexagon lock nuts are covered in 8-page illustrated catalog "M-F Uni-Torque." Nuts have top threads deflected, causing bolt to bind. They will lock anywhere on a bolt, whether or not they are seated. Nuts are available in ¼ through 2-in. sizes in steel, stainless, brass, bronze and aluminum.

▲ For more details circle NED-992 J4 on enclosed inquiry slip ▲

Hydraulic & Pneumatic Controls

Barksdale Valves—Pressure switch selection has been put into plain terms in selection chart based on users' requirements which is featured in 34-page manual 4G. Literature describes line of manual valves, solenoid valves, solenoid pilot controlled valves and pressure switches. Shear-Seal valve operation together with large ball thrust bearings insure low handle load even at 6000 psi operating pressures.

▲ For more details circle NED-993 J4 on enclosed inquiry slip ▲

Fractional Horsepower Drives

Eaton Mfg. Co., Dynamatic Div.—Fractional horsepower Ajusto-Spede drives detailed in 8-page bulletin FAS are integral combination of alternating current constant speed induction motors, eddy-current couplings and electronic speed controls. Drives of ¼, 1/3 and ½-hp at 1600 rpm have 10:1 constant torque speed range, while ½ and ¾-hp units at 3200 rpm have 20:1 range.

▲ For more details circle NED-994 J4 on enclosed inquiry slip ▲

Industrial Truck Storage Batteries

Thomas A. Edison, Inc., Edison Storage Battery Div.—20-page booklet which has electrical data, weights and dimensions on all standard Edison battery assemblies for industrial trucks is revised to include data on new MC-type storage battery. Operating principle of nickel-iron-alkaline battery is explained.

▲ For more details circle NED-995 J4 on enclosed inquiry slip ▲

Power Cable Supports

Fab-Weld Corp.—12-page illustrated catalog covers cable trays for supporting power and control cables. Trays will carry heavy loads, and are available in painted or galvanized finishes. Wide variety of sizes is described.

▲ For more details circle NED-996 J4 on enclosed inquiry slip ▲

Scale Models

Arthur B. Johnson & Co.—Designed to aid in development and research work, plant layout, personnel training, trade exhibitions, construction estimating, sales promotion, advertising and many other fields, scale models are illustrated in 4-page bulletin K. Range of work from broad stylized type to finely detailed construction is shown.

▲ For more details circle NED-997 J4 on enclosed inquiry slip ▲

Gas-Fired Unit Heaters

Reznor Mfg. Co.—How, when and why to use gas fired unit heaters is outlined in 20-page illustrated bulletin SA-541-A. Operating principles, installation methods, heat loss estimation and computation of gas line requirements are among the subjects covered.

▲ For more details circle NED-998 J4 on enclosed inquiry slip ▲

Reinforced Resinoid Wheels

Norton Co.—28-page illustrated catalog 1748 covers various types of reinforced resinoid grinding wheels, with a section on mounted wheels and points. Cut-off, hub and flexible hub and straight reinforced wheels are included. Sizes and other data are given together with lists of portable grinding applications and recommended wheel specifications. Typical application photographs are shown.

▲ For more details circle NED-999 J4 on enclosed inquiry slip ▲

TURN PIPE DREAMS INTO PIPE BENDS

Pipe, tube and structural bending is now simplified with a PEDRICK PRODUCTION BENDER. Heretofore difficult bends, such as offsets and off-plane bends, can now be made in production quantities at an amazingly low cost. ALL PEDRICK PRODUCTION BENDERS are complete with motor, and are equipped with automatic duplicate bending relays.

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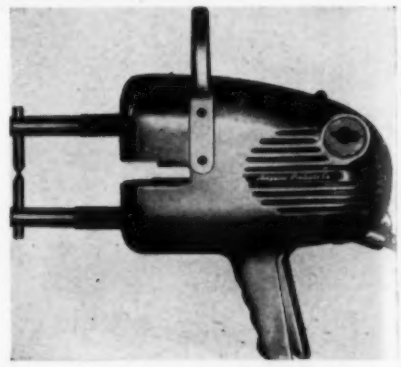

Model 5201 220-240V-60C. Single Phase. Wt. 26 lb.

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• WELDS ALUMINUM (Most alloys) and STEEL
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• CONSISTENTLY GOOD —UNIFORM WELDS Increase Production—Save Money

Ampower has an unlimited number of applications—many jobs that a spot welder of this size is not expected to do. Ideal, especially for "hard to get at" places. Pistol grip assures easy operating and handling.
Electronic controls, transformer and switch are all contained in highly polished aluminum housing.
Also available at small extra cost is a stand into which welder can be quickly mounted and used as foot operated floor model suitable for semi-production work.
An outstanding, dependable spot welder
Write today for FREE folder, price list and address of your nearest Jobber.

AMPOWER PROD. CO., 10207 Ridgeland Ave., P.O.B. 464, Oak Lawn 70, Ill.

▲ For more details circle NED-1002 J4 on enclosed inquiry slip ▲

Now A REAL . . . HUSKY . . . FULL SIZE SPECIFICATION SWITCH BUILT TO DO A FULL SIZE JOB CONTINUOUSLY

P&S 20AC1

IF you need switches that can be used at full rated capacity on fluorescent and incandescent loads

IF you need switches that stand up under continuous heavy duty use

IF you want to cut down replacement costs on heavy duty circuits

YOU'LL LIKE THE WAY P&S A.C. SUPER SWITCHES HANDLE THE JOB

Both 15 and 20 Amp. types can be used on 120 V. to 277 V. fluorescent and incandescent loads at full rated capacity — can be used on motor loads up to 277 V. at 80% of switch rating.

Extra large silver alloy buttons will not oxidize under constant service, keeping temperature rise (common cause of switch failure) at a minimum.

Sturdy, totally-enclosed bodies — Easy back or side wiring — built "to take it." S.P., D.P. and 3-W, Ivory and Brown, 15 and 20 Amp. types, A.C. only.

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OFFICES: 71 Murray St., New York 7, N. Y.
1229 W. Washington Blvd., Chicago 7, Ill.

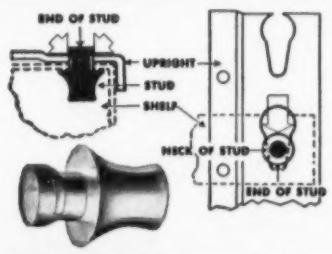
For more details circle NED-1003 J4 on enclosed inquiry slip

SHELVING EXCLUSIVE* gives Equipto Units 3 big advantages

1 60% FASTER ASSEMBLY. No fumbling with nuts, bolts, and tools. Fewer Parts.

2 QUICKER SHELF ADJUSTMENT. Can be instantly shifted without moving adjacent units . . . adjusts on 1½" centers.

3 GREATER SHELF CAPACITY. Each shelf will carry 600 lbs. without permanent deflection . . . 2000 lbs. when reinforced.



*IRON-GRIP SHELF ASSEMBLY (Right Diagram)—FRONT VIEW showing how stud tightens against shelf in sloping keyhole as more weight is applied to shelf.
(Left Diagram) — BOTTOM VIEW CROSS SECTION shows taper on stud which combines with slope in keyhole to form tightest and strongest of grips.

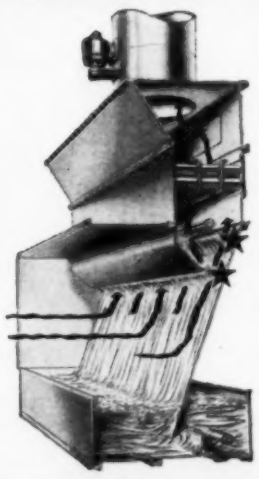
Send for complete 32 page free catalog.

Equipto
Division of Aurora Equipment Co.
690 Prairie Ave., Aurora, Illinois
Steel Shelving...Parts Bins...Drawer Units

For more details circle NED-1004 J4 on enclosed inquiry slip

NEW LOW-COST WATER WASH SPRAY BOOTH

This completely new Binks Style D water wash spray booth will save many dollars for shops interested in lower costs. It costs less to buy, less to operate and less to maintain. A vigorous double washing (see ★★) scrubs overspray from the exhaust air and collects it for reclamation or disposal. Booth and fan stay cleaner longer. The manifold is clog-proof. All parts are easily accessible.



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REPRESENTATIVES IN PRINCIPAL U. S. & CANADIAN CITIES • SEE YOUR CLASSIFIED DIRECTORY

For more details circle NED-1005 J4 on enclosed inquiry slip

New Processes & Materials

WINDOW GLARE PREVENTIVE plastic sheet is reusable

Windows covered with Shade (*NED, Nov.* '52), a Vinylite plastic sheet material, will admit sunlight without glare. Product resists moisture, mold and mildew, oils, alcohols and other chemicals as well as tearing, abrasion and cracking. Cut to pane size, it is applied by wetting glass, pressing polished side against glass and wiping out the water. Shade will stay in place as long as desired, yet will strip off easily. It is washable on or off the window. Custom cut to size, Shade is offered in eight colors, from frosted translucent to blackout black. Produced by **Transeal, Ltd.**, Dept. NED, 100 Oak Tree Ave., South Plainfield, N. J.

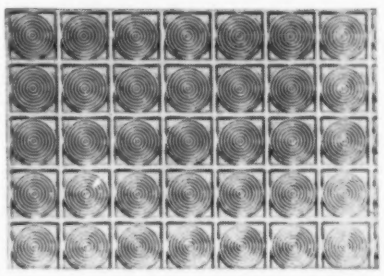
For more details circle NED-1006 J4 on enclosed inquiry slip

WATER-SOLUBLE COOLANT has corrosion inhibiting properties

Combination of wetting agents in TL-131 water-soluble coolant concentrate provides a cooling power which makes it suitable for cutting many high-hardness metals. It is odorless, resists contamination which causes rancidity and dermatitis, and inhibits corrosion. Low surface tension of the wetting agents aids the flow of coolant to the work point, thereby decreasing heat build-up in tools and heat checking in grinding. Made by **S. C. Johnson & Son, Inc.**, Dept. NED, 1525 Howe St., Racine, Wis.

For more details circle NED-1007 J4 on enclosed inquiry slip

PATTERNED METAL offered in variety of finishes

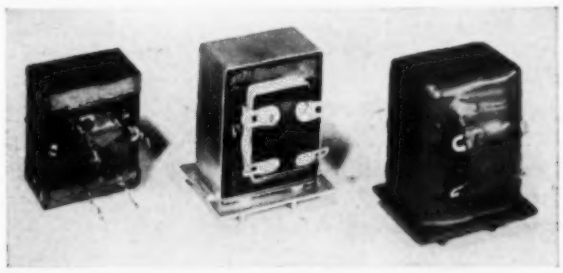


Designed for decorative uses, C-i-S pattern of Rigid-Tex metal combines diminishing circles within squares. Pattern effectively conceals fingerprints, scratches and smudges. It imparts strengthening effect to light gage metal which is furnished in sheet, strip and coil form in a variety of finishes, including two-tone effects, electro-polished and painted finishes. Pattern is 7¾-in. wide and a maximum of 0.025-in. thick in type 302 annealed stainless steel. Maximum thickness specification will vary with type and temper of metal required. Made by **Rigidized Metals Corp.**, 717 Ohio St., Buffalo 3, N. Y.

For more details circle NED-1008 J4 on enclosed inquiry slip

ENCAPSULATION MATERIAL seals transformers against moisture

Open transformers up to 5 kva will consistently exceed performance requirements of MIL-T-27, Grade 1 when encapsulated in neoprene synthetic rubber. Coils



incased in the vulcanized rubber are protected against moisture penetration caused by humid atmospheres, wide temperature fluctuations, vibration or immersion. Terminals are sealed by pressure. Encapsulation is by wrapping neoprene tape or a prefabricated neoprene terminal board around the coils then applying pressure seals to metal components. After installation of mounting fixture, entire unit is dipped twice in viscous neoprene and cured to vulcanize it. Neoprene made by **E. I. du Pont de Nemours & Co.**, Wilmington 98, Del.

For more details circle NED-1009 J4 on enclosed inquiry slip

Circo Vapor Degreasers use 30% less solvent

CIRCO CROSS ROD DEGREASER

New, modern Circo vapor degreasers — whether large or small — are engineered to save on solvent consumption. Construction features like balanced condensing coils, leak-proof pumps and dual vapor-level control are today saving companies 30% and often more in solvent use. Circo degreasers perform faster, save precious man-hours through engineering designs developed through 30 years experience in vapor degreasing.

Circo Introduces Ultrasonic Cleaning
Write for details on the most modern, talked about metal cleaning development of the century—the Circosonic degreaser that cleans small metal parts by the power of sound.

Send for Circo's comprehensive 32-page Manual on Vapor Degreasing. No Obligation.

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PER-SOLV (Perchlorethylene) CIRCO-SOLV (Trichlorethylene)
Vapor Degreasers • Metal Parts Washers • Dryers • Solvent Recovery Stills

For more details circle NED-1010 J4 on enclosed inquiry slip

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FORGINGS • ROD • SCREW MACHINE PRODUCTS
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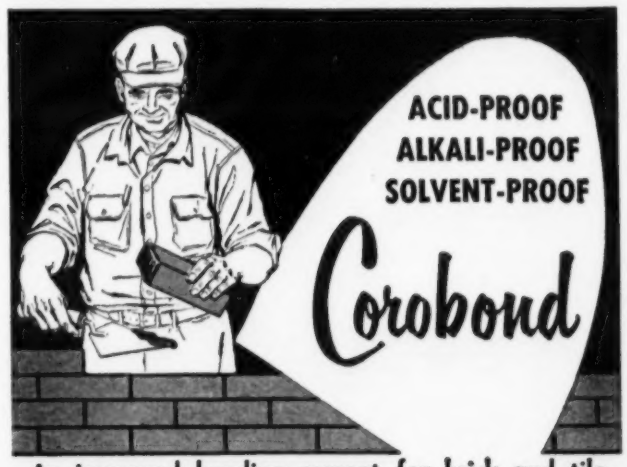

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Superior workability, greater economy, and longer pot life are integral components of COROBOND . . . an improved synthetic resinous bonding cement for brick and tile. Acid, alkali, and solvent-proof . . . COROBOND spreads easily, will not extrude from bottom courses, and provides high mechanical strength. Liquid and powder are supplied in proper ratio to insure a perfect mix every-time. Longer pot life eliminates waste when large batches are mixed.

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4838 Ridge Road, Cleveland, Ohio
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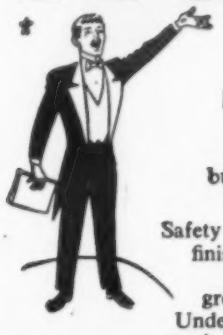

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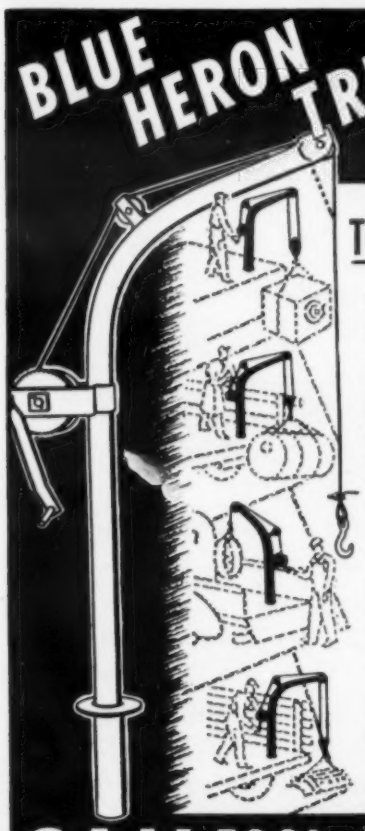
BLUE HERON TRUCK CRANE SAVES



Time Money Labor

ONE MAN can handle up to ONE TON —EASILY and SAFELY!—with a BLUE HERON TRUCK CRANE. Crane swivels through full circle; one man can lift from socket, leaving truck body clear.

Equip ALL company trucks with sockets. Then change cranes from truck to truck.

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A NEW DISC...A "NEW" VALVE

Crane No. 7 Brass Valves with Quick-Change Composition Disc

Save time, trouble, and money by standardizing on Crane Composition Disc 150-Pound Globes, Angles and Checks. Simple to service . . . no need for big inventory of repair parts. When a leak shows up, make a "new" valve—simply by replacing the disc holder assembly.

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New Literature & Catalogs

Variable Speed Drive

Reeves Pulley Co.—24-page well-illustrated catalog M-543 covers redesigned fractional horsepower Vari-Speed Motodrives. Units are available in ¼, 1/3, ½ and ¾-hp capacities in speed ratios of 2:1 through 10:1. Vertical, horizontal, 45-degree and vertical drive shaft models are available with speeds from 3 to 4660 rpm. Lubrication system is featured.

▲ For more details circle NED-1016 J4 on enclosed inquiry slip ▲

Overhead Materials Handling

Cleveland Crane & Engineering Co., Tramrail Div. —12-page illustrated "Engineering & Application Data" booklet describes various track drives, cranes, electrification, buckets, grabs and other aspects of overhead materials handling systems. Design features of the equipment are shown.

▲ For more details circle NED-1017 J4 on enclosed inquiry slip ▲

Hydraulic Pumps

Sprague Engineering & Sales Corp.—Model S-216-C series air-driven high pressure hydraulic pump described in 4-page bulletin will develop discharge pressures ranging up to 30,500 psi. Units operate at maximum inlet pressures of 150 psi and can be incorporated in hydraulic presses or clamping machines, shears and riveters. They are also well suited to hydrostatic testing.

▲ For more details circle NED-1018 J4 on enclosed inquiry slip ▲

Air Conditioner

Niagara Blower Co.—8-page illustrated bulletin 122 covers industrial air conditioning in process control and other applications using type A units. Conditioners can be used over a temperature range from below freezing point of water up to 140° F. They are available in air capacity ranges between 1000 and 24,000 cfm.

▲ For more details circle NED-1019 J4 on enclosed inquiry slip ▲

Pipe Markings & ID Labels

North Shore Nameplate, Inc. — Stock listing of many newly added "Pipe Markings and Identification Labels" is provided in 8-page bulletin of this title. Standard card size is 2¼ x 9 in. and is furnished in various colors. Identification tapes require no moistening, apply to round and flat surfaces and are unaffected by cold, humidity or vibration.

▲ For more details circle NED-1020 J4 on enclosed inquiry slip ▲

Production Facilities

East Chicago Machine Tool Corp. — Facilities of this company for machining, welding and fabricating, machine building and product manufacturing are described in 16-page illustrated brochure. Capacities of lathes, planers, milling machines, drill presses and boring mills are detailed and examples of fabrications are shown.

▲ For more details circle NED-1021 J4 on enclosed inquiry slip ▲

Protective Apparel

Surety Rubber Co. — Besides listing industrial aprons and other protective apparel, 4-page illustrated bulletin also includes actual swatches of plastic and coated fabric materials in which they are available. Type of service for which each material is best suited is related. Aprons, sleeves, spats, leggings and gloves are covered.

▲ For more details circle NED-1022 J4 on enclosed inquiry slip ▲

Stop Watches

Arthur S. La Pine & Co.—12-page catalog describes line of 60 different heavy-duty stop watches. Design uses coil-spring units to provide vibration and shock resistance. Full details are given.

▲ For more details circle NED-1023 J4 on enclosed inquiry slip ▲

Forming & Bending Aluminum

"Forming And Bending Kaiser Aluminum" is a 272-page fully-illustrated handbook designed to assist in product design and development. Data include comparisons of various types of bending and forming equipment, characteristics of specific alloys and their suitability to particular operations, and comparison of methods and techniques for solving typical production problems. Comparative study of aluminum and some of the ferrous metals is also made. Free copies are available on letterhead request to Technical Editor, Kaiser Aluminum & Chemical Sales, Inc., 919 North Michigan, Chicago 11, Ill.

▲ For more details circle NED-1024 J4 on enclosed inquiry slip ▲

CUTLER HAMMER CO.

"Our BASCO Sheet Steel Separators have stepped-up production and cut-down injuries"

Regardless of grease, oil or finish, BASCO separates round, square, nested or odd shapes, without scratching! Costs nothing to operate or maintain — nothing to wear out! Saves Gloves—LowersCosts! 18 Standard Models to handle sheets up to ¼" plate, stacks 48" wide and 30" high. Special Sizes on order.
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MFGD. BY BASCO MFG. CO., INC.

E. V. NIELSEN, INC.
128 BROAD ST. STAMFORD, CONN.

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DIRECT READING U-TUBE

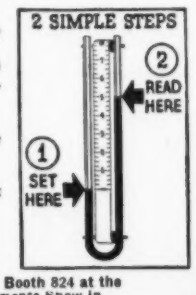
MANOMETER

with sliding scale range 12" to 120"

This instrument is the very finest sliding scale Manometer. Extremely accurate measurements are assured by the sliding scale feature; no possibility of error due to adding readings of the two legs.

- Positive action bead-chain drive
- Easy front scale adjustment
- Scales in inches and tenths —pounds and tenths—centimeters and millimeters
- Fully enclosed with plate glass cover
- Red lined heavy wall Pyrex tube

Write for bulletin 40-L



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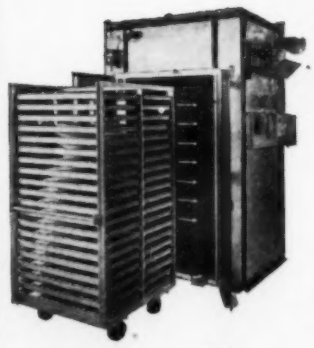
LYDON OVENS DRYERS



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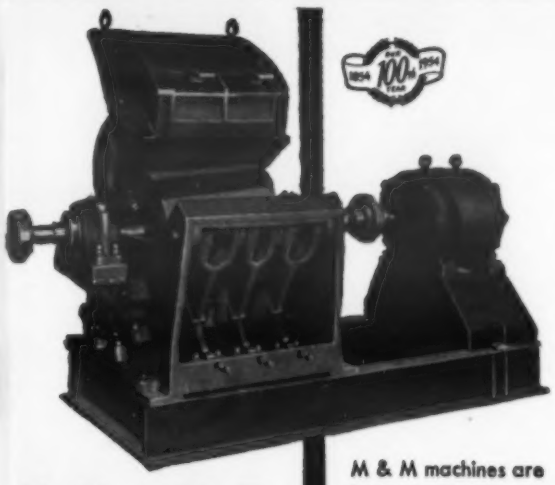

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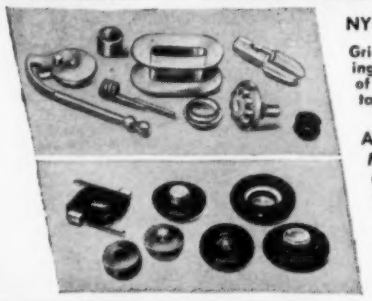

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trial kit will surface 30 sq ft

A trial kit of Pennsalt NeoFloor skidproof coating, sufficient to surface 30 sq ft, is now available for test purposes. Product provides a comfortable footing on floors made hazardous by oils, grease or chemicals. Coating, which will stand up under heavy traffic, consists of a grit-like material anchored in matrix of resilient neoprene and bonded firmly to floor first covered by an adhesive primer. Both primer and coating liquids can be applied with brush or roller on concrete, steel, wood or other floor surfaces. Coating resists fumes, acids, alkalies, salt and solvents at temperatures up to 220° F. Kit consists of 1 gal of NeoCoat Gray, 1 pt of NeoPrime B, 1 pt of NeoCoat thinner and 10 lb of grit. Offered by **Pennsylvania Salt Mfg. Co.**, 932 Widener Bldg., Philadelphia 7, Pa.

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BONDING AGENT
shear strength is 2500 psi

Bonding old cement to new without scraping, chipping or roughing surface is made possible with Clinch-T bonding material. Product can be used in bonding metal-to-metal, glass-to-glass, wood-to-wood, masonry-to-masonry, or any combination of these substances to each other. Shear strength is 2500 psi. It will bond plaster to cement that has not completely cured, can be applied over damp or dry walls and is unaffected by humidity or condensation. Product is nontoxic and verminproof, will not burn or deteriorate, resists most acids and alkalies and is not affected by alkalinity of gypsum, lime-putty, plaster or Portland cement. It can be covered in 1 hour after application. Flexibility or adhesive strength never diminishes. Formulated by **Dasco Chemical Co.**, 1602 Thames St., Baltimore 31, Md.

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STOPS THE LEAK IN 2 MINUTES

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PLUS physical strength and chemical inertness

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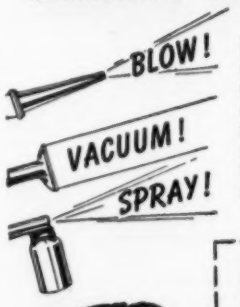

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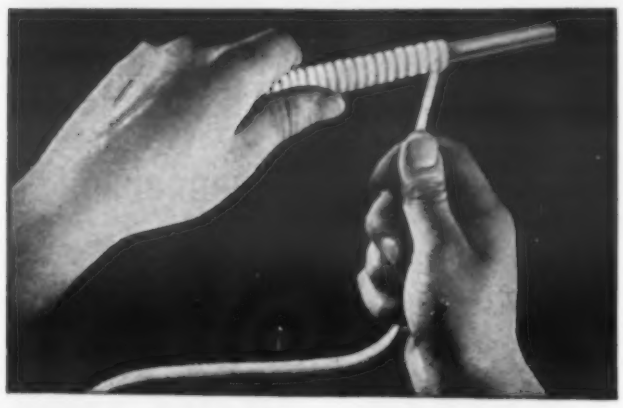

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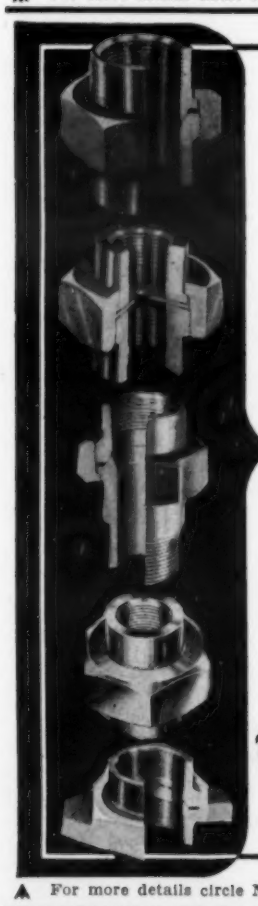

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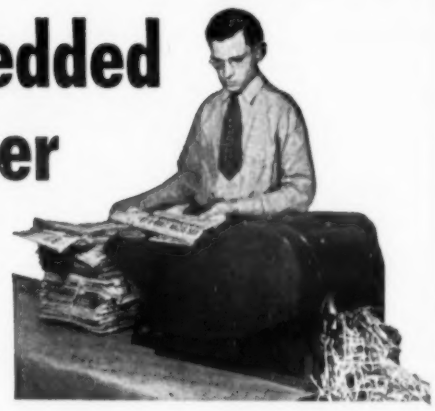

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New Processes & Materials

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are 12 ft long, 48 15/16-in. wide

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diameters from 42 to 840 microns

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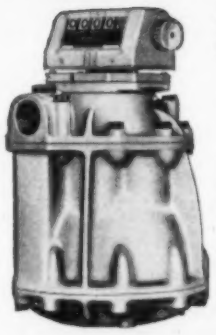

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